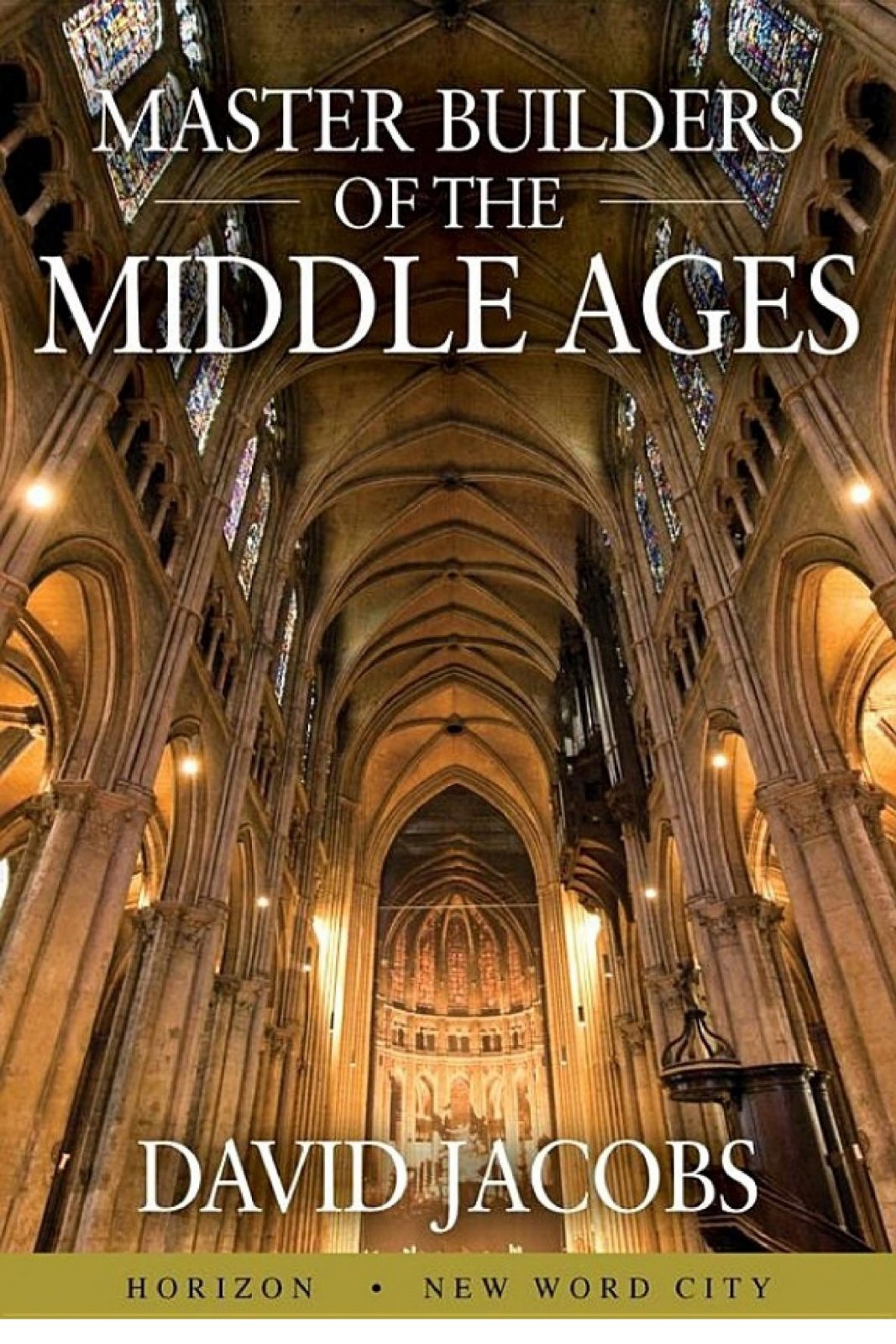
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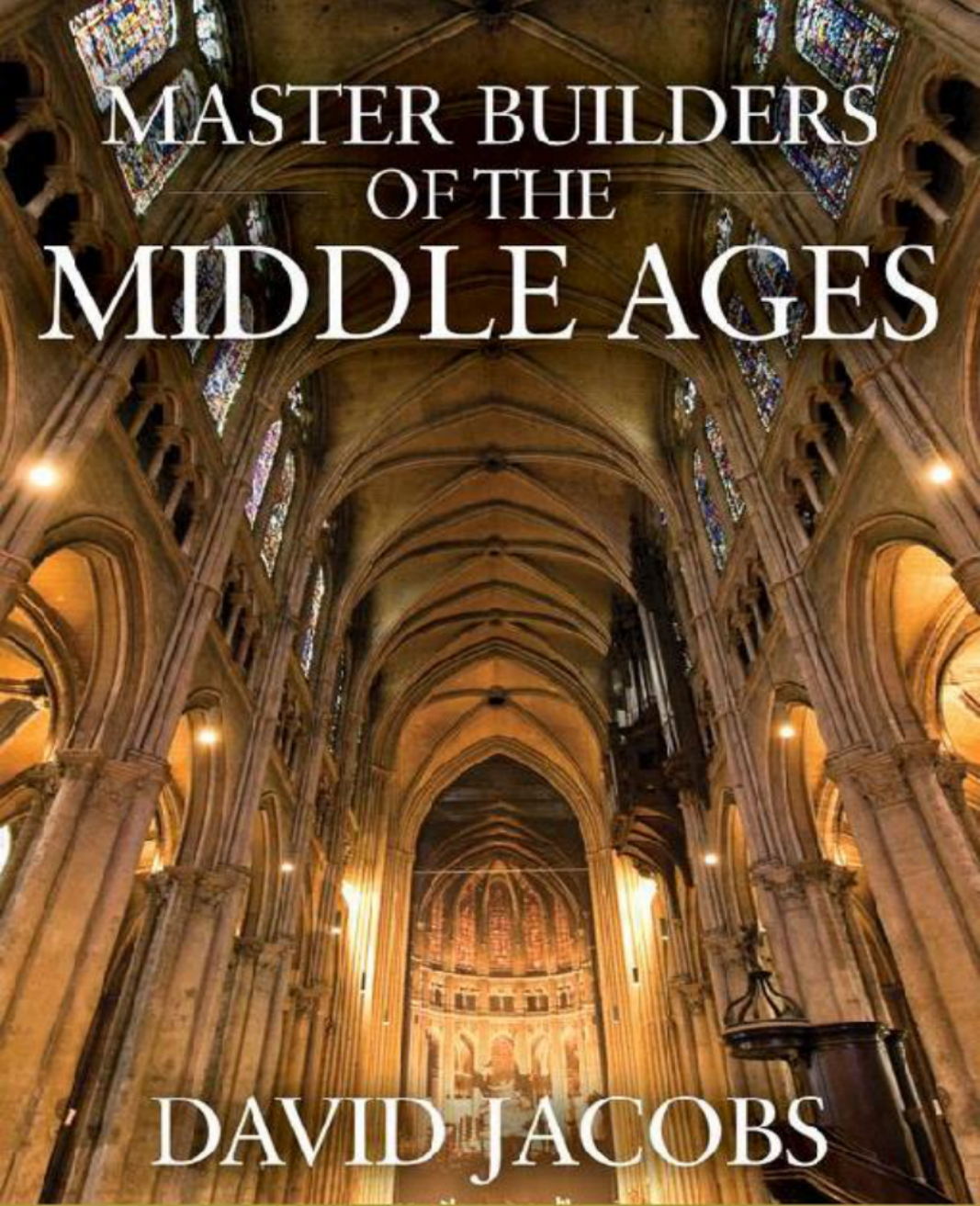

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MASTER BUILDERS OF THE MIDDLE AGES

DAVID JACOBS

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I

ABBOT SUGER'S GREAT CHURCH

On an August evening in 1124, King Louis VI of France received word that his country was about to be invaded by the allied forces of the German emperor and English king.

Louis was surprised - and unprepared - for war. He hurried from his castle in Paris to the Abbey of Saint-Denis - an ancient monastery named for the third-century bishop Louis, believed to be, after God, the singular protector of the realm. In the subterranean crypt of the abbey, he knelt before the bones of the saint and prayed for the safe deliverance of France, pledging a generous donation to the monastery if he should return from battle victorious. Afterward, he visited with his childhood friend and advisor, Abbot Suger, to discuss strategy before mobilizing his troops.

Louis had first met Suger when he was sent to study at the Abbey of Saint-Denis as a boy. Though Suger had come from much humbler means, the monastery school blurred social divisions. The dauphin and the young monk in training developed a friendship that continued as Louis assumed the throne and Suger rose to the rank of abbot.

Abbot Suger understood that the German and English forces would soon advance across its borders. Still, he advised his friend not to respond with force – just yet. That's because the two-pronged invasion had caught the king's army off guard - and left it too scattered to launch an effective counterattack. The monk instead counseled the king to call an assembly of the most powerful clerics and landowners in France and ask them to supply money, material, and men to raise a national army.

King Louis had reason to be skeptical of his friend's proposal. To be sure, his reign would mark the beginning of the rise in power and influence of the French monarchy. But at that point, Louis's France, like many kingdoms in twelfth-century Europe, was little more than a loose knot of political convenience. At a time when the line between Church and state was blurred, if drawn at all, the bishops, monks, and feudal lords of the realm vied relentlessly with the king - and each other - for power. Louis knew that at least half the men Suger recommended he turn to for help would be delighted to see him crushed by the invading armies.

The scholarly abbot, however, was not only a man of faith but

a shrewd politician. In the people of France, he had sensed a groundswell of devotion he thought could, if properly stirred, work to Louis's advantage.

In the Middle Ages, all wars were said to be holy wars - and all causes considered divinely inspired. Thus, Suger proposed to interpret the political German-English invasion as an attack on the banner of Saint Denis himself. It was Suger himself who had written that Saint-Denis, "after God, was the singular protector of the French realm." By enlisting the saint into the cause, he reasoned, few of those invited to attend the meeting could refuse - whatever their feelings about Louis.

Moreover, by turning the invasion into a holy war, Suger made it a matter of concern to Pope Calixtus II. As the bishops and lords of France knew, Calixtus - the former Guy of Burgundy and a Frenchman - would not tolerate an assault on Saint-Denis. They also knew that the pontiff was Louis's cousin and Abbot Suger's friend. One might ignore an invitation from the king or the monk, but to risk offending the pope would be foolhardy.

Abbot Suger's hunch was right.

The influential men of France embraced the "holy cause." And soon, King Louis led a large, united army to meet the invaders, who had been counting on French disunity to work in their favor. When the German and English saw the formidable forces assembled against them, they retreated and returned home.

Though Louis had not exactly defeated the enemy in battle, he still considered himself the victor. The influential Abbot Suger became, after the king, the most powerful man in France. (Suger retained his position even after Louis VI's death in 1137. When the new monarch, Louis VII, went to the Holy Land on the Second Crusade in 1147, Suger was named regent of France, and for more than two years, served as chief of state.)

As he had pledged, Louis VI donated a fortune to the Abbey of Saint-Denis, proclaimed it the religious capital of the kingdom and guaranteed it a handsome annual subsidy.

Although the Abbey of Saint-Denis was the most important religious shrine in the country, it hardly looked the part. In many ways, it suffered from its importance and popularity. Besides the remains of Saint-Denis, the church housed other relics: a nail from the cross on which Jesus died and a thorn from the Crown of Thorns. In that age, religion was a palpable presence, and relics attracted the devout. The sheer volume of pilgrims who visited the shrine threatened to destroy it. Abbot Suger had struggled to keep the monastery in good repair. Though they provided a lucrative income for the abbey, the frequent festivals and steady stream of pilgrims took their toll on the structure. On several occasions, bystanders were trampled to death by mobs stampeding to pray before the relics of Saint Denis. Walls, pillars, and floors were cracking.

The 300-year-old abbey church was simply not large enough to accommodate the ever-increasing crowds. As far as Abbot Suger was concerned, it was not grand enough either. By the third decade of the twelfth century, he had come to believe that the people of France merited something better. He resolved to build a new sanctuary unlike any other in Christendom - a magnificent shrine to the glory of God.

Later, when he wrote about his great building project, Suger would report that he'd been guided by a celestial vision. But there was a large measure of practical concern in the abbot's plan. As historian Otto von Simson noted, "Saint-Denis . . . was to be the capital of the realm, the place where the different and antagonistic factions within France were to be reconciled and where they could rally around the patron saint and the king." Both Suger and the king desired an architectural manifestation of the alliance between sacred and secular power.

The man who would be credited with sparking the Gothic movement with this building was a unique exemplar of the combination of sacred and secular power.

Suger, the son of poor peasants, had entered the abbey for an education at the age of ten. Impressed with the boy's good nature and intelligence, the current abbot, named Adam, made Suger the companion of the dauphin, the future Louis VI, who also had been sent to the abbey for schooling.

In 1106, Suger took his vows as a monk and became Abbot Adam's most trusted assistant. From the start of his tenure as an administrator at Saint-Denis, Suger's practical, worldly education took precedence over his religious vocation. One of his responsibilities: to investigate and alleviate the financial troubles of districts under the abbey's control. At the time, much of the land in Europe was owned by the Church, a state of affairs known as "mortmain." As legal owner of all properties within its jurisdiction, the abbey was entitled to a percentage of anything made or grown in the area. Abbot Adam was fair with the inhabitants of his province. But many in the clergy were not: Peasants were allowed to keep only a small portion of their labors.

In his investigations, Brother Suger discovered that when a formerly prosperous district suddenly reduced its contributions to Saint-Denis, it was often because local Church officials were demanding too much from the people in its parish. To address this, the young monk ordered that the obligations under mortmain be reduced. He also included the peasants in the affairs of the Church; drawing people and religion closer together became a lifelong mission. In addition to his diplomatic and administrative skills, Suger proved he had a military flair when he led a peasant army against the troops of a land baron who had been looting farms.

A cleric who could also lead on the battlefield was someone the king could not overlook. By now, Suger's childhood friend Louis had become King Louis VI, and he retained the services of his school chum. Their youthful bonds were now transformed into a mature relationship, not of equals perhaps, but of trust and responsibility. Suger was named Louis's ambassador to the pope and traveled to various papal conferences. It was during one of those trips that he learned he would take control of the monastery where he'd been educated.

When Abbot Adam died in 1122, Pope Calixtus appointed the enterprising, forty-year-old Suger abbot of Saint-Denis. Of course, King Louis VI approved the appointment enthusiastically.

Having this worldly priest in the de facto ecclesiastical seat of royal power would be pivotal to a major change in church architecture.

Most churchmen of the day - including Suger's friend Bernard of Clairvaux (Saint Bernard) - were proponents of the simple, pious life, advocating meditation, prayer, self-discipline, and personal sacrifice. Accordingly, the churches of the early Middle Ages, though often quite beautiful, tended to be as dark, cold, and somber as the theology of the time.

Abbot Suger followed the ascetic practices of self-discipline and personal sacrifice - but only to a point. He preferred the extravagant to the plain and relished good food and drink. While the best of everything was available to him at the king's court, at first he lived simply. His monastery cell was small and sparsely furnished, and he ate and drank in moderation. What he enjoyed most was good company, stimulating conversation, and laughter – indulgences he refused to renounce. After a long day at court or on a diplomatic mission, he could often be found in the abbey dining hall with his monks, reciting Latin poetry or telling stories of pompous courtesans and hypocritical priests, eliciting exuberant laughter.

In the few years after his appointment as abbot, Suger's habits became more lavish, prompting a letter from Bernard of Clairvaux. Suger moderated his ways and earned a letter of congratulation from Bernard, who now saw the ambitious abbot as an important ally. Eventually, it seems, the two powerful clerics agreed to disagree on certain things.

"Let every man follow his own opinion," Suger wrote. "As for myself, I declare that it has always seemed right to me that everything which is most precious should above all add to the celebration of the Holy Eucharist. If golden cups, golden phials and small golden mortars were used, in obedience with the Word of God and by the command of the Prophet . . . Should we dispose of the golden vases and precious stones and all that creation holds most valuable?

"Those who criticize us," Suger continued, "claim that this celebration needs only a holy soul, a pure mind and faithful intention. We are certainly in complete agreement that these are what matter above all else. But we believe that outward ornaments and sacred chalices should serve nowhere so much as in our worship, and this with all inward purity and all outward nobility."

Suger was indefatigable. In addition to his ecclesiastical and political duties, he was a historian who wrote prolifically - making him, in the view of one chronicler of the age, "the first systematic historian since antiquity." But more, Suger had "a keen eye for great personalities and great historical moments" and "an equal ability to bring them back to life."

"Suger was not a spectator but an actor," wrote von Simson. "He himself had forged and utilized the crises he chronicles, and it is this role, as well as his gifts as a historian, that irresistibly direct his narrative, and our eyes with it, toward the place where the historical and the providential intersect. This place is Saint-Denis."

With his unusual combination of piety and worldliness, Abbot Suger, smart and savvy, well-traveled and an intimate of the powerful, was now in a position to transform the church at Saint-Denis, and in doing that change the direction of ecclesiastical architecture.

In 1125, a year after his advice to Louis had helped the monarch win a bloodless war, the abbot announced his plans for a new abbey. The response was overwhelming - proof of his popularity in the community. Bishops, lords, merchants, and craftsmen throughout the realm sent generous gifts - money and merchandise. Pilgrims with nothing to give provided labor; some harnessed themselves to carts and dragged huge blocks of stone fifteen miles from the quarries at Pontoise to the monastery.

Acknowledging the new prosperity of the abbey, Suger suspended mortmain in the town of Saint-Denis. The townspeople were so moved they took up a collection for the building fund, raising the enormous sum of 200 livres - approximately $65,000 in modern money - far more than typically generated from mortmain.

Year after year, the Abbey of Saint-Denis prospered: The building fund grew; the stack of stones climbed higher. Still, except for necessary repairs and renovations, Suger had done nothing to the monastery. Even the monk's time-consuming duties at court could not explain the delay. How much time would it take, observers wondered, for Abbot Suger to hire the masons, carvers, carpenters, and laborers required to begin? It was not as if he had to build the church himself.

But that's exactly what the abbot had in mind: Suger planned to supervise the church construction himself. The new abbey would be high, bright, light, majestic, warm, and inviting. At the quarry in Pontoise, he selected the smoothest stone with the most beautiful grains. When his carpenters told him that timber long and strong enough to meet his specifications wasn't available, he personally searched the woods surrounding the abbey, marking trees that would make suitable beams. He scoured Europe to find the most talented and skillful craftsmen to build his church. There would be no compromises.

He had the money and knew what he wanted but still, he hesitated. Some said he was reluctant to tear down the old structure because legend maintained that Jesus himself had touched and sanctified the original walls. But Suger's dilemma went deeper than the old building.

The architectural style of churches of his day offended Abbot Suger's sensibilities. Their designs thwarted his efforts to draw people and the Church closer together. He understood that the peasant's devotion to Christ and Church was not deeply rooted. Illiterate and subservient to his bishop or lord, the medieval serf accepted what he was told because it seldom occurred to him to question; doubt, in fact, would result in an eternity of damnation. His faith was based as much on fear as it was belief.

Though not a theological revolutionary, Abbot Suger nevertheless felt that threatening the unfortunate peasants into belief was unnecessary and unworthy of God. At some time in his life, a peasant should be given the opportunity to feel the majesty of God and experience his glory.

While his friend, Bernard, banished all imagery from the cloisters of his order because he thought it drew away from the spiritual elevation of his monks, he was open to a certain amount of ostentation for the lay people. Suger would borrow and expand on that idea, and the architectural project he envisioned would be a monumental expression.

Thus, Suger's church would have high, vaulted ceilings and beautifully carved altars; colorful stained glass and jeweled vestments; vibrant pictures of the saints performing miracles; and lithe sculptures adorning tall, slender columns. Most of

all, he wanted light - heavenly sunlight pouring through great windows, tinted by the stained glass, highlighting the burnished woods, illuminating the pictures, dancing on the jewels and between the stone folds of the statues' robes. That glorious light would warm the worshipers and brighten their bleak, pitiful lives. If only for a moment.

A church filled with light was holier than a dark one, he reasoned, because more of God's essence was allowed to enter. Items that glittered and sparkled further enhanced the presence of God.

But aware that embellishing a church with so many valuable objects might be criticized by more conservative theologians as being too lavish, and therefore unsuitable for a house of God, the abbot waited.

Finally, in 1137 - twelve years after announcing he would build a new abbey church at Saint-Denis - Suger unexpectedly began assembling a workforce, even providing travel expenses to artisans recruited from distant parts of Europe. By the end of the year, work on a new narthex - an antechamber leading to the main entrance of the church - was under way.

The reason for Abbot Suger's decision to begin building is as vague as his reason for waiting. Scholars have speculated that the monk had simply reached a point in his life when he decided it was more important to do what he wanted than to worry about his position in the Church and the State.

The events of 1137 support this speculation. Abbot Suger was fifty-five - old for the Middle Ages when the average life expectancy was about forty. With the death of Louis VI, Suger may have entered a period of reflection and introspection. Though he was on good terms with Louis VII, he probably had doubts about his continued role in the affairs of the government; most chiefs of state preferred to surround themselves with their own men. Suger had lived a long and full life and had accomplished much. He had little to lose. Finally, he went ahead with his plans.

The monk's enthusiasm was contagious. No one could have guessed that the new abbey church at Saint-Denis would mark the beginning of a new epoch in both building and

religion.

At ceremonies marking the start of construction of the new choir on July 14, 1140, the king and his courtiers, archbishops and priests circled the site and walked through the foundation trenches, singing the eighty-sixth Psalm: “Among the gods there is none like unto thee, O Lord; neither are there any works like unto thy works.”

Then they stepped back, and the laborers moved in to place stone upon stone. King Louis VII removed his ring and flipped it into the mortar used to join the stones. The others followed suit, tossing gems and gold jewelry into the thick mixture as everyone sang.

It was, quite literally, a monumental moment and a turning point in the history of art and architecture. But there was deeper meaning to the events of that summer day. Something sacred had begun.

II

THE CATHEDRAL CRUSADE

The new church at the Abbey of Saint-Denis was the first to be built in the architectural style that would later be called Gothic, a name that would come to represent an entire historical period.

As the Gothic movement matured, it would be viewed as a clear departure from what had come before. But as it first emerged, Gothic was more an extension and adaptation of an earlier style that had been evolving over a century – the Romanesque. Of course, Rome would inspire a number of stylistic revivals over the centuries. But with the Gothic, there was also a significant level of influence coming from a place far to the east of Rome.

In the year CE 326, the Roman Emperor Constantine I, who had made Christianity an official religion of his empire, moved his throne from Rome to Byzantium and renamed the ancient city Constantinople. Here, he established the Eastern Roman, or Byzantine, Empire, which quickly became the richest and most powerful on earth.

Through trade with the Middle and Far East, Roman builders in Constantine's empire were exposed to the arts and architecture of the Orient, an influence that was soon seen in the shapes of Byzantine churches. By the sixth century, the Byzantium style had fully matured and produced one of the most splendid edifices in the world: Hagia Sophia in Constantinople.

The design of the Hagia Sophia basilica was similar to that of the temples of India and embellished with the rich, colorful ornamentation of the Orient. Hagia Sophia had Classical Roman arches and columns, but its central dome and smaller semi-domes were neither Eastern nor Western: It was a marriage of both. When it was completed, the basilica was likened in its magnificence to Solomon's Temple in Jerusalem.

Meanwhile, with Constantine's departure from Rome, German barbarians from the north conquered the great city. Yet they were so impressed by the civilization they had destroyed that they began to emulate the ways of the people they had conquered. Tribal leaders embraced Christianity and encouraged their subjects to do the same.

The barbarians did not entirely abandon their primitive roots;

they continued their pagan rituals, though now in the name of Christ. The new rulers employed force, murder, threats, and torture to ensure that their citizens lived obedient Christian lives. The resulting period - approximately the sixth, seventh, and eighth centuries – rightfully became known as the Dark Ages; it was not the light of faith that converted Europeans to Christianity but brute force.

The German conquerors had been a migratory people, not given to putting up grand permanent structures. Their architectural prowess was slight. But the so-called barbarians did retain some of their artistic traditions. In an intricate, abstract style, they fashioned richly ornamented armor and weapons, pottery and utensils, jewelry, and roadside markers. The few churches built during the Dark Ages reflected the builders' backgrounds. While their structures were intended to imitate the temples of the Classical world, they could not escape the more simplistic influences of their ancestors. The most sophisticated artwork created during the period could be found in the illustrated handwritten manuscripts inscribed by monks in the monasteries. Through these testaments, the barbarian traditions held fast until a new and peculiarly Western Christian art was ready to emerge.

Charlemagne, crowned Holy Roman Emperor in 800, was eager to establish a culture worthy of the Western Europe he had unified. He assembled artists and craftsmen familiar with Byzantine art to compete with master builders to the east. Unfortunately, with his death in 814, the projects were abandoned, and few new buildings were erected during the next 100 years. After Charlemagne's death, there was disunity and a disintegration into a loose coalition of individual and highly competitive nations.

By the latter part of the tenth century, the Holy Roman Empire's role in international trade was again equal to that of Byzantium, and its potential military might even greater. With the empire's increased participation in commerce, the size and number of its towns increased accordingly, stimulating a resurgence in church building.

Around the year 1000, Western Christian builders began to combine elements of Classical Roman and Byzantine design, a style obviously influenced by the barbarians, though

considerably refined. The monks in the empire, unwilling to give credit to their Eastern brothers for the elevation of Western culture, preferred to stress - or invent - similarities between the ancient Roman Empire and the Holy Roman Empire. Because the resulting architectural style reminded men in later ages of Roman buildings, they called it Romanesque, meaning "in the Roman manner." The churches did feature large Roman-style arches and Classical columns like the Byzantine, but other similarities were merely superficial.

The Romanesque style blossomed for 200 years, assuming different forms in neighboring countries. In Germany, the style became heavier and more angular. In Italy, the style grew lighter and more colorful. By the beginning of the twelfth century – just as Abbot Suger gained his position of power and influence - the final ingredient would emerge to create the Gothic movement. It would result from new knowledge that came from the religiously inspired warfare between Christians and Muslims known as the Crusades.

The Christian and Muslim worlds had lived side by side in the Middle East since the seventh century. While not the friendliest of neighbors, they had managed to maintain a peaceful coexistence. In the eleventh century, however, the long-civilized Byzantines - the true descendants of the Greeks and Romans - and the equally enlightened Islamic Arabs were supplanted by a primitive and warlike people. In 1071, the Seljuk Turks captured Jerusalem from the Arabs, wrested control of Islam and launched a series of invasions against the Byzantine Empire. In 1095, the knights of the Holy Roman Empire resolved to drive the conquering Muslims from the Holy Land. It was the first Crusade.

At the turn of the twelfth century, the victorious crusaders returned home with glowing reports of the splendor of Hagia Sophia. The Muslims might be infidels, but their architecture, they claimed, was more impressive than anything in Western Christendom. The lovely pointed arches and slender columns of the stone edifices seemed to reach to the heavens, as if created by God himself, and not mere mortals.

In addition to an appreciation of Islamic architecture, the crusaders brought home a new, unwavering spirit. Their battle cry, "God wills it!" became the maxim of an era,

justifying every act of brutality - from the bloodiest war to the wholesale slaughter of peasants. All causes – whether their outcome was for good or evil - became crusades. The spirit needed time to permeate the medieval mindset, but this First Crusade had given it potent momentum.

All of this ferment was swirling around the accomplished abbot of Saint-Denis, and he would absorb pieces of new knowledge and be inspired by the renewed spirit. The way he synthesized it would change art and architecture.

Abbot Suger spent much of his time and energy on the administrative affairs of his church and the political needs of his ruler, becoming particularly consumed with state affairs during his two years as regent when Louis VI left to lead a second Crusade. But the abbot was a man of admirable scope. He was also a scholar, steeped in the standard religious treatises and metaphysical writings of the past and present. A few of these esoteric texts would have a surprisingly practical application in the design and construction of the church of Saint-Denis.

The first was the work of St. Augustine of Hippo, best known in our time for his autobiographical text, "The Confessions." It was another work by Augustine, "De Musica" that greatly influenced the thinking of Suger. In it, Augustine extolled the fundamental beauty of the prime musical intervals – unison, octave, fourth and fifth – and, essentially, presented them as a manifestation of God. It was only a small step to move from musical ratios to the basic principles of geometry.

Like the celestial harmonies, Augustine believed the fundamental shapes described by God the Geometer – square, equilateral triangle, circle – brought the divine into the mind of Man. In order to construct images of heaven out of ordinary materials, a designer must first picture what heaven is like. But what exactly is the nature of the divine reality that objects and sounds of true beauty reflect? Augustine found the answer in a famous passage from the Wisdom of Solomon: "Thou hast ordered all things in measure and number and weight." From this statement, Augustine inferred that the defining quality of divine order is precise mathematical relationships.

In a less esoteric way, these principles already pervaded

church building by the time of the Romanesque period. Nearly every edifice where devotees gathered to worship was built in the shape of a cross, the most ubiquitous and powerful symbol of Christianity. The typical church building was essentially a cross, laid on the ground, with its longest section aligned west to east, so that it pointed toward the Holy Land.

In this cruciform (or cross-shaped) plan, the area beyond the intersection was called the apse, and it was laid out in a semicircle. The apse was commonly divided into a choir in the center and an ambulatory - a circular corridor that surrounded the choir - that housed a series of small chapels. The apse generally was the easternmost part of the church, closest to the Holy Land.

Extending from the apse toward the west was the longest section of the cross: the nave, where the congregation gathered. Defined by a parallel double row of columns, the nave was flanked by aisles. The shorter section of the cross, the transept, lay perpendicular to the nave. The area where the nave and transept intersected was named, appropriately, the crossing. Portals or entrances were constructed at either end of the transept, and the main portal - the west façade - was at the end of the nave.

Suger began rebuilding Saint-Denis with the west façade. From the beginning, he applied the esoteric ideas of St. Augustine into the very solid stone that was coming from the quarry at Pontoise.

As Suger designed the church, he produced a palace of symmetry, where basic geometric building blocks – circles and squares and rotating triangles of vaulted arches – repeated themselves with a duplicative effect that was at once grand and subtle.

By the time his plans were completed, years after his death, Saint-Denis would display a strong organic unity. As one art historian has written: “Every part of the building is linked logically, harmoniously and proportionally to the whole.”

Even more than geometrical perfection, it was the ideal of *luminosity* that inspired Suger. He was, as one historian noted, “infatuated with light.” In his medieval mind, light possessed not so much an aesthetic quality, an ability to

please the onlooker – it was the radiance of truth and its origin was God. Following St. Augustine, Suger would believe that the divine intellect illuminated the human mind. Reading what he thought was the work of his abbey's namesake, Saint-Denis, the abbot came to the belief that creation itself was an act of illumination: The physical light in the sanctuary he was building would make the mystical reality of God palpable to the senses of parishioners.

Suger himself would write that "the church shines with its middle part brightened. For bright is that which is brightly coupled with the bright. And bright is the noble edifice that is pervaded by the new light."

The esoteric theories of luminosity that inspired Suger, the religious scholar, would be made a physical reality by Suger, the builder, in the form of lead and painted glass – the stained glass window. The abbot not only invented the stained glass window at Saint-Denis, but he elevated its importance by allowing illumination - and portraying biblical allegories. The church at Saint-Denis would be suffused with light and rich with religious symbolism. "Suger," wrote von Simson, "was the first to conceive the architectural system as but a frame for his windows, and to conceive his windows not as wall openings but as translucent surfaces to be adorned by sacred paintings."

Von Simson believed that one window depicting Moses appearing veiled before the Israelites was the quintessential example of Suger's theological ideas made manifest in glass. The image, von Simson wrote, "was so obvious, so irresistible, that it was bound to impress itself upon everyone's mind. We cannot be surprised that the image was powerful enough to induce Suger to transform the entire sanctuary into a transparent cosmos."

To achieve his lofty goals in the new building, the abbot was aided greatly by the time in which he started working. By the fourth decade of the thirteenth century, the state of the building arts and introduction of innovations from the East allowed Suger to exploit two new construction techniques at Saint-Denis.

Early civilizations developed two ways of building. Until modern times, these two systems - or combinations of both -

provided the basis for almost all construction. Where stone and good timber were readily available - in Mycenaean Greece, for example - people placed horizontal elements (roofs, ceilings) atop the vertical components (walls, columns) that acted as supports. This system is called postand-lintel. Conversely, nomadic peoples and those whose muddy, marshy land provided little stone and timber developed the system known as vaulting. In its most primitive form, a vault might be a double row of tapered reeds stuck in the ground, with their tops bent together and tied. On top of this crude framing, leaves and mud or skins could be placed. (The vault most familiar to those in the United States is the Native-American wigwam.)

The structural basis of the post-and-lintel system is drastically different from that of the vault. It consists of an equal balance of horizontal and vertical forces, creating an independent shell, while the vault, as a purely vertical structure, is nothing more than a skeleton around which a shell might be built.

Many Romanesque churches had vaulted naves under timber roofs of post-and-lintel construction. Within the nave, parallel rows of columns were built, and round arches were erected across the nave from each column to the column opposite. These round arches produced the half-cylinder shape called the barrel or tunnel vault. Needless to say, reed and mud had been left far behind: Romanesque vaults were made of tapered stone blocks placed over arch skeletons of timber. The heaviness of the stone greatly increased the natural thrust inherent to all vaulted structures. To prevent the thrust of the vaults from pushing the walls of the church downward and outward from their tops, the builders braced the walls from the outside with vertical supports known as buttresses. The buttress would be adapted by the Gothic builders, and become a distinguishing aspect of the period, along with two innovations: the pointed arch and the ribbed vault. The two became the signature elements of the Gothic style, joined later by a variation that became known as the flying buttress.

While the classic rounded arch of the Romans would seem to adhere more strictly to Suger’s aesthetic preference for basic geometric forms, the pointed arch had a significant practical advantage: it was stronger. And it transferred the forces of weight in a different way: More of the weight pushed *down*

vertically rather than *out* horizontally. The ceiling of the vaulted expanse of the nave, which had become standard practice in a Romanesque church, was essentially a barrel. The thrust of the weight required support along its entire length by thick walls. The barrel vault encloses space rather than opening it, and it cannot be penetrated to allow light to enter without risking collapse.

Using pointed arches, builders could support the weight with a series of piers, support columns much less bulky than the massive structures needed for the Romanesque barrel vaults. Essentially, Suger's new style of construction transformed the main structural components of the church from a static box to a dynamic skeleton. The ceilings rose higher and spread in a series of vaults that used a ribbed support structure, which allowed more slender support columns. Now, the walls of the building could be more analogous to skin. They could be pierced by any number of windows, allowing in the radiant light of the Lord.

The new Saint-Denis was soaring, airy, and radiant.

On July 11, 1144, almost twenty years after Louis VI had prayed at the shrine of Saint-Denis for help with foreign invaders, Abbot Suger's revolutionary basilica was dedicated in a grand ceremony of royal and ecclesiastical pomp. The king was there, accompanied by his current consort, Eleanor of Aquitaine, and many other nobles.

Though no contemporary accounts have survived, the dedication ceremony clearly inspired the same enthusiasm as had the laying of the foundation in 1140. King Louis VII was particularly pleased. Significantly, Bernard of Clairvaux – who had sometimes criticized his friend Suger for his lavishness - praised the building. Their approval effectively guaranteed the success of the new style. "Contemporaries," von Simson observed, "felt immediately that it was designed as an architectural prototype."

Abbot Suger would later write a small summation of his grand project, titled "Booklet on the Consecration." But he glossed over any technical aspects of his achievement. The abbot, von Simson wrote, "wished to be understood as an architect who *built* theology." Somehow, he had translated the theology of light and music into the Gothic style, and he

seemed to recognize his signal achievement. Above one entrance door, he ordered this inscription:

> Marvel not at the gold and the expense, but at the craftsmanship of the work,
> Bright is the noble work; but being nobly bright, the work
> Should brighten the minds, so that they may travel, through the true lights,
> To the True Light where Christ is the true door . . .
> The dull mind rises to truth through that which is material.

Later, when he produced his "Booklet," about Saint-Denis, Suger wrote of his desired effect on a parishioner who entered his church: "They set aside the vexations and grievous anxieties caused by sensuality and the exterior senses; emancipating themselves from their oppression and focusing the undivided vision of their minds upon the hope of eternal reward."

Suger went to his eternal reward in 1151, and his body was buried at Saint-Denis in a crypt marked simply, "Here lies Abbot Suger." (His less monastically modest side can be glimpsed in one of the church's myriad stained glass windows, where a figure greatly resembling the abbot is surrounded by other priests worshiping at his feet. And his figure appears in at least two stone carvings around entrances to the church.)

He had managed to accomplish many things in his life. As an architect, the praise he might have most appreciated came from a recent scholar, who described his new design for Saint-Denis: "So strong is the sense of space that it seems almost separated from the glass and masonry around it." Suger had achieved his ultimate goal: He had not just built a novel and impressive structure, he had created a sacred space. And that space became the parent monument of all Gothic cathedrals. Soon there would be many offspring. In the region around Paris, known as the Île-de-France, the impetus to build had begun.

III

THE SPREAD OF THE NOVUM OPUS

News of the dedication of St. Denis spread quickly through the towns that made up the Île -de-France region, both because of the pomp and circumstance of its ceremony, and because of the tales of the impressive new style of ecclesiastical architecture it had introduced.

At the time, no one called Suger's creation "Gothic." That term wouldn't come up until observers reconsidered the twelfth- and thirteenth-century buildings hundreds of years later - and then, in the midst of the Renaissance, it was originally meant as a term of derision, a reference to the barbaric Goths who had overrun imperial Rome. When the high vaults and bright stained glass of Saint-Denis were clean and new, the revolutionary style they embodied was simply known as the "Novum Opus," new work.

It wasn't entirely new, of course. The churches that came to be known as Gothic didn't use different or new materials. They used the same stone and wood and glass that had been used in the years of the Romanesque and even earlier. In fact, many materials were recycled during the transition from old to new.

What was different was the way the Gothic combined elements of design to create a new, organically unified whole. The new vision that devised combining pointed arches and ribbed vaulting and (later) a new system for exterior buttressing allowed ever higher vaults and roofs and more windows, creating an entirely new experience for a worshiper of that time - an interior space that was expansive, soaring and bright. The bishops and the lords of the realm couldn't help but take notice of the majestic building created by the savvy abbot of Saint-Denis. And many couldn't resist wanting to have a similar cathedral of their own.

While Louis VII was leading his knights on the ill-fated Second Crusade in 1147-49, Chartres West and the Burgundy Cathedral of Sens were under construction. In fact, Geoffrey, the bishop of Chartres had been a frequent visitor to Saint-Denis during its construction, and no doubt Abbot Suger enthusiastically pointed out to his longtime friend the design innovations at various stages of completion and explained the building process including his experiments and discoveries. Geoffrey was particularly interested because his own sanctuary, the Cathedral of Chartres, had been badly

damaged by fire in 1134, and the reconstruction there was taking much longer than the more ambitious work at Saint-Denis.

What most appealed to Bishop Geoffrey, was the unity of design, specifically the incorporation of the stone carvings above the portals and the statues on the columns, which appeared to Geoffrey to complement the overall architectural design. This unity of design, he thought, was perfect for a Christian church - especially for a great cathedral. In addition to serving as the seat of a religious district, it often functioned as an educational center and city hall. This was just the effect he wanted for the new west façade he was planning for Chartres.

Chartres would be the first of many churches throughout the region influenced by the innovations of Suger. As the years went by and new churches rose around France, many would come to mirror the church at Saint-Denis, including features essential to Gothic architecture of the future. "Contemporaries," von Simson wrote, "felt immediately that Saint-Denis was designed as an architectural prototype."

And it was not just architectural novelty that provided motivation. The Second Crusade further bolstered the crusading spirit. "God wills it!" became the slogan of the bishops of France, who were confident that God wanted them to build new cathedrals, each more impressive than the last. Within a decade, cathedrals constructed after the style of Saint-Denis - Sens, and Chartres West - were starting to dominate important towns and villages of northern France. One religious historian, Abbé Marcel-Joseph Bulteau, estimated that between 1180 and 1270, eighty cathedrals were built in France, and nearly 500 less elaborate abbeys and churches.

Throughout the thirteenth century, the building boom reached beyond the borders of France into Spain, Germany, the so-called Low Countries of Belgium and Holland, and Scandinavia. For almost 400 years - from the start of Abbot Suger's project in 1140 to the dawn of the Renaissance in Italy around 1500 - churches throughout what would come to be known as Europe grew bigger, grander, and more elaborate. The building boom - the Cathedral Crusade - long outlasted the actual Crusades.

In the early days of the Gothic movement, the monks and bishops of the Holy Roman Empire might have been concerned with matching and surpassing the splendor of Hagia Sophia. But as the Byzantine Empire aged and weakened under pressure from its enemies, Western churchmen realized they were now the leaders of Christendom. The Crusaders' motto, "God wills it," applied to every act, virtuous or treacherous. God had willed that they keep the faith and defend it. God had willed that they wage holy, bloody wars against the infidels. And God had willed that they celebrate his glory by building the grandest churches on earth.

When the will of God was revealed to a particular abbot or bishop, he had to seek a papal bull - a document containing formal approval from the pope - before beginning construction on his church. In twelfth- and thirteenth-century Europe, these were not difficult to obtain. After the bull arrived, two priests or brothers were given the responsibility of fundraising.

Typically, the fundraisers traveled throughout the diocese carrying a bier, a moveable frame that bore the relics of the local patron saint. To the peasants and merchants they met along the way, they would recall the exalted life of the saint and the miracles he had performed, then decried the decaying condition of the church named for him. The speakers' eloquence and the sight of the holy relics were usually sufficient to prod the people to contribute to get the building started. Frequently, however, both money and enthusiasm dwindled, and the cleric in charge had to resort to other methods to finance the work. These included reducing taxes for contributors, and special dispensations for the exceptionally generous. Because donors responded differently from one town to the next, the length of time needed to build an edifice varied.

For instance, construction on the Cathedral of Notre Dame in Paris began in 1163 and was not completed until nearly a century later. (Almost all French cathedrals are called Notre Dame, meaning "Our Lady." Because of its fame, the Cathedral of Notre Dame de Paris - "Our Lady of Paris" - has come to be identified simply as "Notre Dame." The others are commonly called by the names of their towns.) By contrast, construction on the Cathedral of Bourges began in 1195 but

was abandoned, unfinished, in 1214. Eleven years were needed to raise the necessary funds to continue, and the structure was completed between 1225 and 1255.

Not so in Chartres: When the cathedral burned down in 1194, parishioners were so anxious to rebuild that they contributed extravagantly and got the new cathedral finished by 1221.

Ironically, the success of the cathedral crusade - and the reason it was a cathedral and not a monastery crusade - is linked to the rise of secular influences. At this stage of the Middle Ages, as commerce increased and towns grew, the center of religious activity shifted from the monastery in the country to the cathedral in town. Cathedrals were city institutions and often came to symbolize a new and growing urban vitality.

Burgeoning commerce also was responsible for an increase in the size and influence of the middle class, specifically merchants and craftsmen. In the tightly interwoven affairs of Church and State, the most effective way for the middle class to achieve rank and privilege - not to mention salvation - was to maintain close ties to the bishop. This spurred them to donate all they could to the cathedral.

Anxious to demonstrate their increasing prosperity, townspeople wanted their cathedral to be bigger and finer than those in neighboring towns. With the bishop more than willing to cooperate, rivalries between dioceses now took the form of what amounted to cathedral-building contests.

The most obvious area of competition was in the sheer height of the main section of the church, the nave. As both building technology improved and competitive instincts kicked in, nave heights rose at a dizzying pace. The Cathedral at Sens topped out at eighty feet in the middle of the twelfth century. Chartres, finished just before the turn of the thirteenth century, rose to 121 feet. Little more than twenty-five years after that, the vault of the nave of the Cathedral at Amiens measured nearly 140 feet from the ground.

These churches became grand monuments to their secular and religious rulers and great sources of pride to residents. As one student of the Gothic period, Robert Scott wrote, “Bishops compared what they had built or planned to build

with what other bishops had done or planned to do. It became a sign of one's place in the church and society to claim that the height of the nave of one's cathedral, the magnificence of its tower or spire, the grandeur and beauty of its stained glass, the length of its nave, it's overall mass – whatever – was greater, bigger, better, more audacious than any that had preceded it."

Indeed, Scott adds, it might have been impossible to raise the money for construction if not for the competitive forces of civic pride.

Because of their growing financial dependency on laymen rather than the clergy and the nobility, the bishops occasionally permitted the new cathedrals to be used for secular purposes. In most towns, it became traditional for local guilds made up of weavers, cobblers, metal smiths, carpenters, for example – to help pay for the church's stained-glass windows. In exchange for their gift, the bishop allowed the cathedral to be used for guild meetings. Elsewhere, they were used for festivals, political assemblies, and lectures. Chapels became classrooms, and the nave, which was essentially the church's public auditorium, frequently doubled as a theater. In effect, the cathedrals became civic centers.

While there were certainly advantages for religious authorities to exploit the social utility of their grand edifices, there were also dangers. The medieval serfs may have been illiterate and superstitious, but they were not blind. The more time they spent at the cathedral, the more attuned they became to the harshness of life's realities. The serfs knew that the feudal system was unjust, but now they began to grasp that their miserable existence was not necessarily God's will. Consequently, they began to resent the lavishness of the Church and the poverty of their family. Gradually, they realized there was a point at which they could, and should, draw a line.

In the thirteenth century, the people of Reims did just that. In his rush to complete his elaborate cathedral, the bishop of Reims imposed outlandishly high taxes and increased the peasantry's obligations under mortmain. The brunt of the new taxes targeted the city's flourishing linen industry. By law, the bishop was entitled not only to tax the profits of the weavers'

and linen merchants' commune but to take a percentage of the value of their exports as well. The tolerance of this double taxation reached the breaking point when the bishop unwisely demanded yet another tax.

The Reims commune, it seems, had agreed to loan a substantial amount of money to a brother commune in the distant town of Auxerre. Aware of this, the bishop insisted that the money loaned constituted an exportable item and was therefore taxable. Incensed, the weavers refused his demand for the usual percentage and vowed to withhold all future taxes until he backed down. When the bishop threatened to use force, the commune seized the local military compound and took possession of its weapons. Next, they stormed the cathedral construction site and removed enough stone and timber to erect barricades in the streets. Fearing that the local peasantry might join the rebellion, the bishop diplomatically claimed a misunderstanding and withdrew his demand. Work on the cathedral resumed, but more slowly - and of course less expensively.

The bishop of Laon didn't fare as well. When he refused to lighten the burdensome tax, the local burghers and serfs burned the cathedral and killed all the priests, including the bishop, even severing one of his fingers to remove a valuable ring. His successor, Bishop Barthélemy de Jur, wisely decided to work with the angry peasants instead of antagonizing them. He established a liberal government and listened sympathetically to their complaints. As a result, the cathedral that he began in 1160 was usable after only twelve years. Such speed was uncommon. Because they were vast undertakings that involved complicated logistics and large amounts of money, most cathedrals took decades to complete and more than a few remained unfinished after a century of start-and-stop work.

Few bishops were as accommodating to the lay people as the one in Laon - or allowed such free and joyous access to the cathedral. Once a year, for example, on the Feast of the Holy Innocents, religious services were conducted by choir boys; no clergymen were allowed to enter. The congregants sang a boisterous satire of holy Mass as the townspeople threw rotten fruit and vegetables and shouted bawdy remarks. But this irreverent celebration paled in comparison to the famous Feast of Fools.

People flocked from miles around to attend this annual mockery of the rich and powerful. The day-long feast was hosted by specially elected "officials": popes, archbishops, bishops, and various nobles selected from Laon's dunces, beggars, and pranksters. (Perhaps the most famous depiction of a Feast of the Fools celebration appears in Victor Hugo's *The Hunchback of Notre Dame*, when Quasimodo is elected pope of the fools.) The more vicious their satire, the louder the crowd cheered. After the revelers gorged themselves with food and drink, they ended the day with the grand procession of the "Ragamuffins," which mimicked the processions of the clergy; the most prominent positions were given to the dirtiest, sloppiest, and clumsiest marchers. (Needless to say, the tradition of the Feast of the Fools had a controversial history among the hierarchy of the Catholic Church.)

Even the farmers and vintners around Laon made their voices heard. They, too, demanded that their contributions to the cathedral be acknowledged. As a result, the bishop ordered statues of oxen to be placed on the cathedral roof, and grapevines carved clearly on the cathedral columns.

As time passed, this sort of secular influence on church building increased, surpassing religion as the primary force behind the development of architecture. Basic human desires - the need for personal power, the yearning for glory, the thirst for status - were ultimately responsible for the spread of the Gothic style.

As bishops began insisting on grander churches, masons had to devise new methods to make foundations strong enough to support them. Artisans were pressed to create ever more elaborate sculptures to compete with the increasingly ornate carvings of neighboring cathedrals. When the bishop of Reims saw that the portal of the cathedral at Amiens was finer than his, he hired sculptor Jean le Loup, who had designed the portal, and instructed him to outdo his own work. Jean did just that.

The chauvinistic zeal of bishops for more and more ornamentation may have caused some unintended consequences. For many years, historian Jean Gimpel notes, builders and sculptors worked in collaboration. But as sculpture grew more elaborate and pronounced, "perhaps the sculptor lost some of his original humility . . . Drunk with his

new independence and his amazing intellectual and material success, he wanted to put statues everywhere. He wanted to cover the churches and smother them with statues." Indeed, in some of the later Gothic projects, like Notre-Dame de Paris, the statues numbered in the thousands.

Perhaps it was inevitable that bishops and monks would effectively lose control of the Cathedral Crusade. The new way of building had already become so complex by the early decades of the thirteenth century, and changed so rapidly afterward, that keeping up with the technical developments became a full-time occupation. Masons became architects. Like sculptors, they focused on the artistic elements and improving their technical skills. Some in the clergy thought they cared more about their competence than their spirituality. "Having broken with the architect," Gimpel observes, "the sculptor next broke with the theologians." In time, it was said that the religious figures on the church of La Sainte-Chapelle in Paris resembled the statuary at Reims, but that they had lost their souls.

IV

BISHOPS AND BUILDERS

If the monks and bishops of France could have foreseen the effect of their building competition on the masons, they might have abandoned the Cathedral Crusade at the outset. Masons were known to be stubborn and argumentative, quick to complain about lack of funds, inadequate materials, and conditions in general. As long as the churchmen retained control of the overall construction, this had not been an issue. The problem started when the international Gothic style, which required greater technical expertise, began to emerge. Unable to keep up with the rapidly changing technology, the clergy became dependent on the masons instead of the other way around; only the masons had sufficient time to master the complex building techniques necessary to adapt to the constant technical and stylistic developments that occurred in the century following the building of Saint-Denis around 1150.

As soon as the masons realized how important they had become, they demanded higher pay, and got it. In an age where piety and humility were prized, they dressed vulgarly, wearing flamboyant silks and satins and brightly colored capes lined with gaudy patterned prints. Many let their hair and beards grow long and openly cursed. They were irreverent and contemptuous of the clergy and contradicted the bishop's orders at every opportunity.

Their outrageous behavior angered the bishops, of course, but the churchmen were reluctant to take a hard line. An offended mason might quit and volunteer his services to a rival and might build a cathedral of matchless splendor just to spite his former employer. By the end of the century, the Church, while still powerful enough to control monarchs, was having a great deal of trouble handling the builders who had once been firmly under their thumbs.

By 1230, the Church had had enough. The bishops realized they had allowed things to go too far. Their competitiveness had divided them, and now they were powerless. They decided to put aside their rivalries and unite. Only a show of unity could make the masons abandon their worldly ways and end their defiance of the Church. An order went out from every abbey and cathedral: The masons were to shave off their beards and cut their hair.

The masons refused. They immediately called a strike, and all

building in France stopped. The bishops, thinking the injunction would work in their favor, held firm. When the masons still refused to budge, the bishops threatened them with imprisonment, torture, and death. After several weeks of stalemate, the masons made an announcement: If the order was not rescinded, the brotherhood of masons would systematically burn every church, monastery, and cathedral in France to the ground.

Considering the enormous power of the Church, this was a risky ultimatum. Nevertheless, the bishops backed down. Still long-haired and bearded, the masons returned to work, and the Cathedral Crusade continued. It was at this point that the Church lost all influence over the development of future architectural styles.

The masons would develop a hierarchical guild that proceeded from green apprentices to master designers. Eventually, the relationship between bishop and most senior masons resembled the client-architect arrangement prevalent today. The prestige, position, and prosperity of the top masons rose even higher, until they were equal in status to university professors. Over the roughly two-century duration of the Cathedral Crusade, masons would transform their status from virtual anonymity on Abbot Suger's Saint-Denis to what Gothic historian William Anderson describes as "being held in the highest honor for their genius and their accomplishments."

All the masons had to do to achieve this lofty position was to recognize their collective value. They had clearly come a long way. Only centuries before their emancipation, the masons were, in effect, invisible. In the early Middle Ages, the only professional masons were transients from Byzantium marshaled by European rulers to build in the West. When these nomads taught the monks the principles of building, the monks became the masons and began to school local artisans in the ways of construction. The work was amateurish, but it made little difference; they built few buildings.

Just before the onset of the Romanesque era, some monasteries and nobles began employing in-house builders - uneducated and illiterate masons plucked from the peasantry to live and work alongside them in their monasteries or estates.

A resident builder assigned to a nobleman was obligated to follow his lord everywhere, assembling the materials and personnel required to build whatever his master dictated - frequently an encampment or a temporary fortification. His living conditions were only slightly better than the workers he hired (or those forced into conscription by the lord's order); these laborers ate and slept in the barn or outside while the resident builder ate and slept in the kitchen or in the servants' tents.

For the working brother assigned to a monastery, conditions were even more severe. A virtual prisoner, he was supervised by a warden, whose job it was to keep the laborers in line. Childlike in his faith and only vaguely aware of the meaning of the religious rituals he was forced to perform, he was nevertheless required to live under the harsh dictates of monastic law - with its enforced deprivation, vows of silence, and periodic fasts.

Whether he worked for a monk or for a nobleman, the early mason had little to do with architecture. Building plans were drafted by his master, who gave them to the mason to execute. Essentially, the mason was a construction foreman.

But in the eleventh century, with the rise of the Romanesque style and the upsurge in construction, the masons began spending more time working at the actual building site. No longer relegated to sitting on the sidelines, they began to absorb the fundamentals of architecture, including a deeper understanding of mathematics - particularly geometry - and with them, a greater ability to reason. Additionally, as their masters became more concerned with architectural beauty, they sometimes sent the masons to study and sketch the new churches they had heard about from visiting dignitaries. Travel broadened the mason's horizons; some even learned to read and write.

As individual masons grew more competent, the old system began to crumble. Though the abbot or baron was still in charge, he began to appreciate that some masons were more skilled than others and had a greater appreciation for aesthetics. These talented masons might be loaned - or rented - to his master's friends and associates, which gave him a greater sense of his own worth. Shown that he was no longer a common laborer and that he could do what others

could not, he began to crave recognition. Soon, he and his fellow artisans, anxious to make their mark as original and inventive thinkers, began signing their names to their work or adding unique features that would distinguish their workmanship from others.

By the eleventh century, the mason's growing importance soon gave him leeway to disregard the rules. (This newfound freedom coincided with a dawning realization by the serfs - two-thirds of the population - that they were nothing but slaves to their oppressive masters.)

Most masons, forbidden to assemble openly, met in secret. Wherever their brothers were treated badly, neighboring guilds sent agitators to foment rebellion. One method of gaining power was to withhold information about new building techniques.

At the beginning of the twelfth century, though still laborers, the masons had their freedom and began to informally organize. They still had little leverage, but in the first half of the century, they won a modest concession that turned out to be a most valuable tool: the lodge.

The lodge was a long, one-story structure containing separate rooms for various activities: dining, sleeping, dressing stones, and storing tools. According to the agreement negotiated by the masons' unions, one lodge was to be built on every construction site at the patron's expense. This not only protected a mason's possessions - either from theft or the weather - it provided him a comfortable, private space where he could be in fellowship with his colleagues.

With the advent of the lodge, the masons felt things they had never felt before: a sense of dignity, of pride in their occupation, of importance. Not even home and family, if they had them, made the masons feel as good. By the time of the Cathedral Crusade, the lodge had shaped the masons into a brotherhood, more tightly united than any guild. Most of all, it gave the masons a means to organize; through organization came power.

As the years went on, the mason's lodge often transformed into a school of sorts. Dining halls and dormitories, sitting rooms and studies were added, as well as a library to store

architectural drawings, sorely needed as building in the Gothic style had become extraordinarily complex.

Travelers welcomed as guests at a mason's lodge repaid their hosts with descriptions of the buildings they had seen en route. Early in the Gothic period, the masons simply listened attentively and committed the details to memory. As architecture became more complex in the early 1200s, the visitors drew plans from memory, and the masons sketched the drawings again and again until they grasped the principles. In the second half of the thirteenth century, as the Gothic style reached its peak, it became virtually impossible for masons to build a structure without relying on drawn plans. At that point, they began to keep their sketches for future reference. As visitors came and went, they made diagrams of the building their hosts were working on and took them to other lodges. As a result, each lodge came to have a collection of drawings of most of the important architecture under construction.

After centuries in servitude, the masons had achieved independence and were proud of their new prosperity and elevated status. They wore expensive clothing and traveled first-class - stopping at the best inns, ordering the finest meals and most exquisite wines. As Gimpel points out, in the later period of the Gothic movement near the end of the thirteenth century, top masons could afford to build their own houses. Unfortunately, this kind of luxury would not last for many masons. As war consumed Europe in the fourteenth century and building stopped, many skilled masons were reduced to carving cannonballs.

But during the heyday of building in the 1200s, successful masons frequently worked on several projects at once, which meant they had to travel some distance. With their splendid apparel, they attracted the avaricious highwaymen who prowled the roads in search of easy money. After being robbed one too many times, the masonry brotherhood settled on a solution. They would simply carry no money or valuables. When the bandits were particularly brazen, the masons might even leave even their horses and wagons behind. Because it was seldom more than a day's journey between lodges, they would rely on their fellow masons to provide the funds and equipment they needed.

It became imperative to protect the lodge from bandits or imposters who might steal not only their money but also their building secrets. To prevent an outsider from infiltrating the brotherhood, the masons developed a uniform ritual for identifying their colleagues. These rituals, while used throughout Western Europe, were well-kept secrets.

When a traveling mason arrived at the lodge, he knocked on the front door three times, opened the door, and called, "Do masons work here?" Then, he closed the door and waited. Within a few minutes, one of the masons inside would remove his apron, don his jacket and hat, and greet the visitor at the door carrying a chisel - a symbol of welcome. After an exchange of passwords and a secret handgrip, they would engage in a prescribed conversation:

> VISITOR: Greet the honorable mason.
>
> HOST: God thank the honorable mason.
>
> VISITOR: The honorable master [name of master mason at guest's home lodge], his warden, and the pious and honorable masons send greetings to you and your honor.
>
> HOST: Thanks to your honorable master [name], to his warden, and to his pious and honorable masons.

With that, the visitor was admitted and given food, wine, and a bed for as long as he cared to stay.

Those who came looking for work were employed if work was available; if not, they were redirected to a lodge where jobs could be found and were given enough provisions – including a horse and wagon, if necessary – to get them there. If they had to stop at an inn along the way, they also were given money. This was not charity: The lodge required masons to travel this way.

The masons were well organized and had achieved strength through unity. But that did not mean they did not compete. Indeed, the rivalries of the masons equaled the rivalries of the bishops.

Perhaps the most unusual and dramatic story of rivalry among masons is the tragic tale of Alexandre de Berneval, the late Gothic master and mason of Rouen Cathedral.

In 1439, Berneval was commissioned to complete the crossing and to erect the two rose windows at the church of Saint-Ouen in Rouen. Rose windows - large, round, ornamented windows that represent stylized roses - were difficult to make. The artist had to duplicate the delicacy of embroidery, but with stone.

Berneval decided to allow one of his protégés to create the northern window, while he went to work on the southern one. Apparently, he finished first and went away, leaving his student alone in the church. When he returned, he discovered that his pupil not only had mastered the technique but had created a much finer window than he had. Furious, Berneval stabbed the young man to death. He was hanged for his crime.

Murder, even in the generally violent world of medieval times, was not a commonplace outcome of the rivalries among masons. Mostly, there was a more benign, unspoken competition to see which mason could display his name most prominently on his work. While most of them faired well, the grand prize undoubtedly belongs to one of the masons employed in the earlier century at Chartres, Reims, or Amiens.

These three cathedrals - and many more to follow - had enormous mosaic spirals or labyrinths set into the floor, with their centers located at the middle of the crossing, the section of the church between the altar and the main assembly area. As a rule, the crossing was the most prominent part of a cathedral - bright, airy, and spacious. According to a precedent allegedly set at Solomon’s Temple in Jerusalem, these centers were the spots to which all pilgrimages were made. At Chartres, having shuffled their way on their knees across a tile labyrinth 768 feet long, the pilgrims reached the center, where the master mason had left his mark. At Amiens and Reims, the center of the twisting path reveals a bronze cross, surrounded by images of the bishops and the master masons who worked there.

For every craftsman who was able to inscribe his name in a cathedral floor, or immortalize his image in a carving (or perhaps in the grotesque face of a gargoyle), thousands remained anonymous in their labors. As Gothic projects grew more intricate and technically sophisticated, the top master

masons were, for all practical purposes, creating a nascent profession by practicing architecture. But though they were literate men, none thought to leave behind a manual or treatise.

One young mason from northern France would be the exception.

V

THE NOTEBOOKS OF VILLARD DE HONNECOURT

A traveler in northern France in the early thirteenth century was witness to an astonishing spectacle. It must have seemed that every town one visited was taken up with a massive works project, as cathedrals were built or rebuilt in a competitive frenzy throughout the region. Notre Dame was rising on the banks of the Seine in Paris. In Laon, a new cathedral with a great tall tower was under construction. The rebuilding of Chartres, begun by Abbot Suger's friend, Bishop Geoffrey, was still going full tilt, as were projects in Reims, Amiens, and Beauvais.

Masons were needed throughout the Île de France region, and the itinerant nature of the trade meant that many young men enjoyed opportunities to travel and study that would have been unimaginable just a generation before.

One of those young men was named Villard. He was born around 1200 in the tiny village of Honnecourt in northern France. Little is known of his biography. But it is clear he traveled widely for the time and was a keen observer with broad interests. He filled thirty-three parchment sheets with his drawings and notes, forming what one historian describes as "a textbook encompassing everything a Gothic architect needed to learn."

Villard was born in a time when the guild system of training through the stages of apprentice, journeyman, and master sought to ensure continuity. Though his family background is not known for certain, it would have been common at the time for heredity to be a main factor in him entering the trade. He probably had the benefit of education in a cathedral or church school, studying Latin and mathematics. He could write in French and Latin.

In fact, it is widely thought that Villard's purpose was to create a "lodge book" that would be kept for the instruction of younger masons as they moved from lodge to lodge in the increasingly itinerant work. Gimpel believes the folios might have begun as personal notebooks, but close examination shows the handwriting is not always the same. "What was initially personal," Gimpel writes, "must have become a lodge sketchbook. After Villard's death it must have passed into the hands of other architects who added drawings and some remarks."

Gimpel adds, "Like other stonecutters and architects of his day, Villard travelled a great good deal and, thanks to his sketchbook, we can follow some of his journeys." Indeed, the young man's sketches of the most important structures of the time provide an itinerary of his wanderings. He must have been born around 1190, for he drew the ground plan of the Cistercian abbey being built around that time in Vaucelles, which is a neighbor of Honnecourt. Passing through Chartres, he sketched the west portal's rose window. At Laon, the west tower of the cathedral caught his eye, and he drew that in his notebooks. On his way to Hungary, where he had been summoned for a project by the Cistercians - and where, he noted, "I long remained" - he sketched an ideal plan for a church of the order. He drew the south rose window of the Lausanne cathedral.

But Villard's interests went far beyond the boundaries of work with stones and stained glass. His drawings fall into ten categories: animals, architecture, carpentry, church furnishings, geometry, humans, masonry, mechanical devices, survey, and even recipes and formulas. In the last category is included a recipe for a medicinal potion made with cannabis.

Villard's drawings are characteristic of the artistic trends of the first quarter of the thirteenth century. His advice is sober and direct, now and then interspersed with phrases that he must have seen in existing technical literature. He never fails to convey his own opinion concerning the relative worth of an artistic or technical solution to a problem, and he invariably points to the ingenious and the uniquely satisfactory.

"Villard de Honnecourt gives you greeting," the book begins, "and beseeches all who will work by the aids that are found in this book to pray for his soul and bear him in remembrance."

"I have been to many countries," he writes on another page, "but nowhere have I seen a tower such as the one at Laon." This begins one of the more architecturally anatomical of his passages, which describes the Laon tower with its eight buttresses, four square turrets, arches, and moldings. "Consider this carefully," Villard advises, "for you will learn from it about how to construct and raise such a structure . . . Pay good heed to your work, for if you wish to make a good tower you must choose buttresses of sufficient depth. Do

apply all your attention to your work, for only then can you do that which is worthy of a wise and noble man."

He may have worked with masonry, but his notebooks show that Villard was equally fascinated by Man. By one count, the notebooks contain 163 drawings of the human figure. There are individuals and groups in biblical scenes. Two drawings represent crucifixion scenes, while another portrays the Virgin and Child, possibly a rendering of a sculpture contained in the cathedral at Reims.

He could move easily from the sacred to the profane. Beside his sketches of religious figures were drawings of masons throwing dice. Villard copied nude figures from late Classical and Byzantine art. He drew small sketches of human and animal heads and sketched people and animals in various poses. Perhaps the oddest of his drawings are that of a lion and a lion-taming scene.

"The lion," he wrote on one of the parchment sheaves. "I will tell you of the training of the lion. He who trains the lion has two dogs. When he wants the lion to do something and the lion growls, he beats his dogs. When the lion sees the dogs being beaten he becomes afraid and does as he is told. I will not speak of the lion when he is in a rage, for then he would not do what anybody tells him, either good or bad. And you should know that this lion was drawn from life."

Life in its various manifestations is the key characteristic of Villard's notebooks. In this, he presages the end of medievalism and its God-fearing and superstitious ways and provides a glimpse toward the more enlightened future. A few of his drawings of human figures outlined in geometric forms – circles, squares, triangles – are remarkably similar to Leonardo da Vinci's *Vitruvian Man*. Both Villard and da Vinci were inspired by the Roman builder, Vitruvius, who lived during the reign of Augustus and whose writings were one of only two works on architecture that survived the Dark Ages. Vitruvius taught masons the importance of moral character in architects and their need to have a wide general education. And he stressed that the proportion of a building should be related to the nature of man and the universe.

While it is unclear how much formal education Villard received, it seems he followed Vitruvius's advice to study

broadly. “From our point of view,” wrote Gimpel, “the most interesting aspect of [Villard’s] sketchbook is the extent to which it reveals the wide curiosity of a thirteenth-century architect.”

That curiosity was expansive enough to include a fascination with minor inventions of the day – what we would now call gadgets. His notes include enthusiastic descriptions of church altar decorations that would move to follow the bishop around the altar as he said mass. He includes plans for a hand warmer. “This device is good for a bishop,” Villard wrote. “If he holds it in his hand he will be warm so long as the fire lasts. It is made in such a fashion that whichever way up is, the little stove inside is always straight.” (The technology behind Villard’s hand warming gadget would later be adapted for nautical navigation and weather readings.)

The mason’s study went beyond gadgetry to practical applications like a hydraulic saw that would cut wood underwater and machines for lifting weights – a vital tool in those days of stone construction.

While Villard de Honnecourt was a unique man, he typified the small group of thirteenth-century men created by social forces unleashed in the Cathedral Crusade: an elite class of workers who were literate, technically sophisticated, and inquisitive.

There were, of course, many more workers who were not so fortunate. Most of the work done on the massive and widespread building projects of the Gothic period was accomplished by men who led a harder and more limited life. But the enterprising, worldly, and curious spirit of Villard would come to typify a later age that would be rightfully lauded. This young man from northern France was rooted in his own medieval times, but he had one foot tentatively pointing toward the Renaissance.

VI

CHARTRES: THE ORIGINS OF THE PALACE OF THE VIRGIN

No two medieval cathedrals are alike.

Though each possesses structural elements common to the Romanesque and Gothic styles of architecture, each is unique. This individuality was remarkable in an age when uniformity was prized and strict regulations governed every task. It was one of the great contradictions of the Gothic period in which hidebound adherence to tradition would exist side-by-side with wild experimentation – often on the same building site.

Clerics wanting to build new cathedrals used identical methods to raise funds and employ, for instance, masons - who hired crews to install scaffolding and construct roofing as prescribed. As the movement spread beyond France, German stonecutters used much the same techniques as the Spaniards, and both obeyed the same rigid conventions when carving statuary. Their statues of the Virgin Mary, for example, always had shoes; but God, Jesus, the apostles, and the angels were invariably barefoot. Aware of the punishment for deviating from the norm, the masons rigidly adhered to the regulations.

Still, despite the enforced uniformity, there were no standards for cathedrals - no defined heights, widths, depths, or colors. In the early Middle Ages, too little building was going on to merit regulations; later, the Romanesque and Gothic styles changed so rapidly that there was no time to devise any. Building practice outdistanced theology. "A certain conception of progress . . . and a fruitful spirit of invention were essential to the building of the cathedrals," wrote Gimpel.

Nowhere did the co-mingling of tradition and invention achieve greater fulfillment than in the sandstone structure of the Cathedral of Our Lady of Chartres.

It is a nearly perfect example of a medieval church. Though not stylistically typical, the cathedral at Chartres demonstrates how the prevailing forces of the age converged to create a magnificent building and keep it intact.

The Cathedral of Chartres is valuable to students of architecture because it is a product of the first half of the Christian epoch. Century after century, it was built,

destroyed, restored, and rebuilt. As it entered each new phase of existence, it retained elements of its former structure. The church's evolution paralleled the evolution not only of architecture but of Christianity itself.

According to Christian lore, the church of Our Lady of Chartres originally was built a century or more before the birth of the Virgin Mary. That a Christian church preceded the Christian religion is an obvious paradox. Yet, like many legends, this one has some basis in fact. In his *Commentaries*, Julius Caesar told a story about a place of worship that had been built at Chartres by the Druids. Modern archaeologists agree that certain portions of the foundation of the Cathedral of Chartres probably predate the Christian era. In light of this evidence, it is assumed that the old church had been some sort of pagan temple.

The legend could conceivably be closer to truth than that. In the first and second centuries BCE, Hebrew communities settled in lands throughout the Roman Empire. At that time, the Jews were eagerly anticipating the arrival of their Messiah - and the onset of a glorious messianic era. In fact, false messiahs were common. Though the evidence is sketchy, it's possible that a Jewish congregation in the town of Chartres built a synagogue dedicated to the coming Messiah or to his mother – the Virgin Mary, who according to Old Testament prophecy, "shall conceive and bear a son."

Whatever the reason it was built, the original church at Chartres was certainly one of Christendom's earliest monuments.

But it was not simply the advent of Christianity that made the church at Chartres an eventual shrine. Changing times and the evolution of Christian attitudes over many centuries contributed significantly.

As Christianity spread throughout Western Europe, previously pagan cultures were often forced to embrace it. They did so grudgingly, adapting what would become official theology dictated from Rome by clinging to similarities between the new religion and their previous beliefs. Consequently, it was common for peoples who were previously thought of as barbarians to worship Christian saints who were warriors or martyrs. The docile and forgiving nature of Jesus and the

merciful purity of his Mother Mary did not fit so well into their experience in this world, nor their view of the next.

However, there had long been among pagan cultures a small strain of goddess worship, and from the beginning of the spread of Christianity, those beliefs began to transform into a cult of followers who worshiped the Virgin Mother. As the cult grew over the first several centuries after the death of Christ, a tradition developed that obligated them to make long pilgrimages and great sacrifices on behalf of the Mother of God. The Council of Ephesus in 431 sanctioned the Virgin Mary as Mother of God; the dissemination of images of the Virgin and Child, which came to embody church doctrine, soon followed. Over time, members of this growing cult traveled so frequently to the church at Chartres that the city soon became a major trade crossroad of France. These pilgrims were so devoted to their cause that when the Aquitainian warrior Hunald burned the town and church in 743, they directed the townspeople to rebuild the sanctuary first and the town second, setting a precedent that would be followed for centuries.

Meanwhile, for administrative reasons, starting in the fifth century, the pope had divided his realm into districts or dioceses, each headed by a bishop. The bishop's home church, which functioned as the administrative headquarters of the diocese, was called a cathedral (from the Latin *cathedra*, or "chair of the bishop"). Because Chartres was a prosperous trade center, it was a logical place to build a cathedral.

By the ninth century, the diocese structure was firmly in place, and Chartres was an important outpost of the Roman church. It was in the middle of that century, in 858, that the Viking leader Hasting and his troops attacked and burned the town of Chartres. The bishop at the time, Frotbold, and his followers retreated into the cathedral. Hasting followed, murdered the bishop, and set fire to the edifice. Once again, because of its growing importance, the church was rebuilt before the surrounding town.

By this time, the cult of the Virgin, which had been growing steadily, was bolstered by the appearance of a relic that further established Chartres as a sacred center of Christendom.

Early in the ninth century, two representatives from the court of Charlemagne - possibly on a diplomatic mission or to buy goods - went to Constantinople. The cult of the Virgin Mary had long been centered in the eastern wing of Christianity. Charlemagne's men stayed in a lodging house run by a woman who claimed to be a descendant of a companion of the Virgin Mary. To substantiate her claim, she produced a red tunic, which she said was worn by the Virgin at the time of her death. Intrigued, the travelers journeyed to Rome and investigated the woman's story. According to available records, they discovered that the Virgin had, indeed, left her red tunic to a friend who then took it to Constantinople.

Deciding that the sacred tunic belonged in the realm of Charlemagne, the travelers conspired to steal it. They contracted a Roman weaver talented enough to duplicate it, then returned to the woman's lodging house and exchanged the fraudulent tunic with the one in her possession. When they returned to Rome, they presented the garment to Emperor Charlemagne, who, in turn, took the prize to France and presented it to the Christians as evidence that the Bible stories they had been told were true.

The sacred relic passed from Charlemagne to his grandson Charles the Bald, whose frequent pilgrimages to Chartres helped to stimulate the growing veneration of the Virgin Mary. In 876, he donated the tunic to the cathedral. When the relic was stolen by invading Normans some thirty-five years later, the angry French lords united their armies and set out to retrieve it. The garment was recaptured. After that, the bishop commissioned a goldsmith to make an exquisite case of gold and cedar to protect the sacred tunic.

Tales of the relic at Chartres - and the adventures surrounding its history - were richly embellished by troubadours at the time. Christians began to interpret this to mean that the Virgin regarded the cathedral at Chartres as her special palace. The cult of the Virgin grew ever larger. By the start of the eleventh century, the Cathedral of Our Lady of Chartres became the best known and most visited church in the Western Christian world.

Because the old cathedral was inadequate to accommodate the legions of visitors to the shrine, Bishop Fulbert had it rebuilt. Fulbert probably completed his church, in an early

Romanesque style, not long before his death in 1028. In 1030, when the upper portion was destroyed by fire, Fulbert's successor, Bishop Thierry, replaced the damaged portions. By this time, the cathedral had assumed the basic elements of its Basilican plan - a central nave with one aisle at each side and a rounded apse at one end opposite the main door at the other. In front of the apse was a raised platform, where the altar was placed, and from where the clergy officiated. At this point, the overseers of Chartres still had not added transepts that would protrude at right angles on either side of the nave, giving the church a schematic cruciform shape. Those would be added later.

In 1134, another fire destroyed much of the west façade of Chartres Cathedral. This was during the administration of Bishop Geoffrey, friend of Abbot Suger. Now, the bishop would "borrow" some of the innovative ideas the abbot was applying at Saint-Denis, and the rebuilding would introduce the new style to Chartres in the 1140s.

Throughout the twelfth century, financed by wealthy merchants and the pilgrims and citizens of Chartres, the church underwent further modifications and improvements, which restored it to its former glory.

The rich and enduring history of Our Lady of Chartres made the competitive spirit of the Cathedral Crusade seem rather vulgar. This cathedral needed no revision. Bishops elsewhere might conscript hundreds and spend fortunes on new cathedrals, but none would ever match the traditions that made Our Lady of Chartres the most precious palace in all of Christendom.

And because of these traditions, the town of Chartres became a center of learning as well as religion and trade. Bishop Geoffrey had made the cathedral school of Chartres - long a theological college of some repute - a magnet for prominent Church intellectuals. Saint Bernard himself had been a faculty member there during his most active and influential years.

The diocese also ran the most celebrated of so-called "grammar" schools of that era. There, the curriculum was secular and followed the Roman model. That is, instruction was divided into seven arts, and those seven were further divided. Medicine was also taught at Chartres.

While the Cathedral school brought the region a certain cachet, the diocese was not perfect. It still was vulnerable to attack, and its administrative operations were cumbersome, inefficient, and in places corrupt. But this was not unusual during the Middle Ages. The Church and State were each controlled by a complex bureaucracy, making it easy for self-seekers to work their way into its upper echelons.

The last twelfth-century bishop of Chartres, however, had no patience with these inefficiencies despite prosperity and a relatively happy population. Renaud de Mouçon, was a magnificent warrior - a hero of the otherwise ill-fated Third Crusade that lasted from 1188 to 1192, led by his friend and rival, England's Richard I. With skill learned on the battlefield, he quickly reinforced the city's fortifications. As word spread that Chartres was no longer so vulnerable, merchants from abroad relocated to the town, ensuring its economic future. Renaud also used his prestige and reputation to reform the administration and purge corrupt officials. He made the town even more prosperous and brightened its already bright prospects. At the beginning of the last decade of the twelfth century, Chartres seemed a flawless place.

Not for long.

On June 10, 1194, a fire broke out, the flames incinerating everything in their path. Most of the town was destroyed, as was the cathedral. This moment marked an important turning point; it would unleash a new energy. The spirit of the age combined with the power of reverence for the Virgin would now produce a true masterpiece of Gothic construction.

VII

FROM ASHES RISES A MASTERPIECE

Through fire and theft and other assorted disasters, the church inspired by the Virgin Mother had endured. Its most important relic, the tunic, had lured pilgrims for nearly three centuries - tangible proof of the Virgin's presence within the sanctuary. Now that it was gone, rebuilding the cathedral would be foolhardy; the townspeople were convinced that their sins had so infuriated the Holy Mother that she had departed from her special palace, allowing it and her tunic to perish.

The news of the fire reached Cardinal Melior of Pisa, the papal legate in France. Melior rushed to Chartres and needed only a few minutes to realize that the most serious damage was not to the cathedral or the town - they could be rebuilt - but to the spirit of the people. Their will to exist as a community had gone up in flames along with their relic. Agreeing with Cardinal Melior that the cathedral must be rebuilt before the spiritual damage was beyond repair, the bishop and the officers of the diocese pledged to invest the greater part of the diocese's revenue, for at least three years, in the reconstruction. Still, they were skeptical. The people of Chartres could be pressed into service, but their hearts would not be in it. And without a meaningful cathedral, the town of Chartres could not function as it had. Undaunted, Cardinal Melior promised to take care of the morale problem.

On the next feast day, the dispirited Chartrians gathered apathetically at the charred ashes of the cathedral for services. After celebrating Mass, Cardinal Melior addressed the assembly. Though no record of his words exists, the eloquent and passionate Italian undoubtedly reminded them of the importance of Chartres Cathedral to Christendom and pleaded for its reconstruction. He likely recalled the traditions of the cathedral and its builders and bemoaned the town's future without a great church. As the impassioned sermon reached its dramatic climax, Bishop Renaud and the clergy appeared in procession, carrying the sacred relic.

The mood changed abruptly from gloom to exhilaration. Cardinal Melior explained that when the fire started, the tunic had been safely locked away in the cathedral crypt.

The jubilant people now realized they had misunderstood: The Holy Mother had not punished them. The Cardinal reinforced this notion by asserting that the fire was, in fact, a

sign from Mary that she desired a more magnificent church, a grander edifice to serve as her palace. In a torrent of giving, they offered coins and jewels and furs and resolved to build the shrine that was worthy of the Virgin Mary.

The merchants of Chartres made certain the initial enthusiasm never failed - their livelihoods depended on the reconstruction of the cathedral. One perceptive medieval scribe wrote, "The temple has always attracted the merchant just because it attracts the faithful. . . . There is no feast without its fair, no fair without its feast: one calls for the other."

Thus, businessmen gave generously, though in measured installments, to keep the momentum going and to prevent their donations from being exhausted on a lavish launch.

Perhaps no other town and no other cathedral would have benefited so much from the spirit of the times. The age was devoted to the Virgin, its noble aspirations directed toward elevating the cult of the Queen of Heaven. And more practically, no other town was better positioned -spiritually, politically, and economically – than Chartres to erect a sanctuary without equal. Since the town now rivaled only Paris as the center of activity for the French monarchs, the bishop's close alliance with the king could only bring more profit to the cathedral. King Phillip Augustus would dedicate funds for construction of a porch on the north side of the new church, and such royal generosity would continue under his son, Louis VII.

The enthusiasm for rebuilding included the common people and was infectious. Soon, people gathered at the nearby quarry at Berchères and, by the thousand, praying and chanting, dragged carts laden with stone the full five miles back to the building site.

With the reappearance of the tunic, a contemporary writer noted, a number of miracles were "achieved." Whether God or the clergy or Cardinal Melior was responsible, the miraculous events were heralded from Germany to Italy, inspiring a continual influx of pilgrims to Chartres. (And an unending supply of volunteer labor.) A volume outlining the supernatural events surrounding the cathedral started circulating titled *Les Miracles de Notre-Dame de Chartres*.

It included the miracle of the child beggar Guillot, an orphan whose tongue had been cut out by a vicious knight. Journeying to Chartres to beg for his bread, the tongue-less child knelt to pray before the charred altar of the Virgin and suddenly erupted in articulate prayers of praise that amazed everyone present. Word of the miracle spread quickly. Pilgrims traveled to Chartres to see him, but, by the time they arrived, the boy had received a new tongue - yet another miracle gift from the Holy Mother.

Though he was at war with the French king, England's King Richard, known in France as Richard Coeur de Lion, was so moved by such tales that he guaranteed safe passage to everyone traveling to Chartres - and allowed priests raising money for the reconstruction to travel freely in his country. The king personally sent donations to the town. (He retained a lifelong admiration for the cathedral, which he often visited.)

In terms of the actual construction, the miracles were helpful: No conscription was necessary. Everyone in Chartres was willing and eager to participate. Pilgrims, serfs, laborers, farmers, craftsmen, merchants, and masons worked together side by side. Everyone became involved, feeling a personal stake in the new cathedral. The devotion created a powerful force. When the American writer Henry Adams made a study of the cathedral at the dawn of the twentieth century, he was compelled to make a comparison to the prominent force of his age. "All the steam in the world," Adams wrote, "could not, like the Virgin, build Chartres."

The religious fervor was no doubt enormously influential. But the worldly standing of the diocese of Chartres certainly played a role. According to von Simson, the prestige and prosperity of the See of Chartres were virtually unrivaled in the kingdom of the Roman church.

The name of the supervisor who oversaw the project isn't clear. He was a brilliant mason; that much is known. The proof is in the product. Until recently, many scholars thought there were three responsible for the completed structure. Today, more believe the first master was the principal one. He likely had control over the design and construction of the edifice, because Bishop Renaud wanted the cathedral rebuilt quickly. Knowing little about architecture himself, he had to

have hired an exceptional mason, to whom he delegated all responsibility.

The identity of the master mason aside, the Cathedral of Chartres rose modestly, almost austerely. Perhaps the workers realized that the Chartrain tradition, personified by St. Bernard, who'd often tried to restrain the more grandiose building impulses of Abbot Suger, called for sanctuary dignified and humble enough to house the spirit of the Holy Virgin.

Uncluttered by superfluous detail, the Cathedral of Chartres is a good example of Gothic structural systems. Because so much of the earlier edifices remain underneath and within the building, the cathedral also illustrates the structural principles from which the Gothic style sprang.

The master of Chartres worked directly over the crypt of Bishop Fulbert's church, so his layout was already determined. This was not a limitation; the basilican plan was - with few exceptions - the only one employed in west European church building after the tenth century. Like all Gothic structures, the Cathedral of Chartres was designed and erected vertically.

At Chartres, the west portal Bishop Geoffrey had built was spared in the great fire of 1194. It now served as an anchor for the new church to come. The west portal tower with its 141-foot spire was imposing but relatively free of superfluous elements. For many years, according to Henry Adams, it would be thought of as the most perfect piece of architecture in the world.

The master mason at Chartres was determined to incorporate the more current Gothic elements that had been refined in the second half of the twelfth century. In place of columns, the master ordered the erection of piers - clusters of slender pillars that emphasized the verticality of the interior.

The stonecutters, or sculptors, carefully joined matching cylinders of stone to form the piers, providing a basic skeleton around which the cathedral would be constructed; the piers were also used to attach scaffolding. After the piers were erected, the workmen built larger round arches across the nave - from each pier to the one diagonally across from

it.

Each set of four piers, forming a square or rectangle called a bay, was crisscrossed by a pair of round arches. Since the diameter of a square is half again as long as the side, the diagonal arches were much higher than the arches along each side of the bay. To eliminate the awkward looking disproportionate arches at the sides, masons began to make the side-to-side arches reach the height of the diagonal arch. This type of vault, called a ribbed vault, permitted masons to build much higher structures than they ever had before.

The ribbed vault was the skeleton of the Gothic cathedral. Its towering elevation made larger windows possible, permitting the sun to bathe the interior in light. But to preserve this characteristic, the workers had to build out from and around the skeleton in a way that would not neutralize the openness gained by the ribbed vault.

At Our Lady of Chartres and many other cathedrals of the era, the elevation was three stories. Some churches were divided into two and others four, but a three-step elevation was the convention.

The first level rose to about half the total height of the vault; this level, the arcade, determined the height of the outer walls of the cathedral. The tops of the arcade and outer walls were joined by planks, making a platform for the workers and later, a roof for the aisles. Level two, the smallest at about fourteen feet, was the triforium. From the top of the triforium, timber was extended to the top of the outer walls, where it joined the aisle roof and formed a triangular passageway within the church. The rest of the elevated vault had nothing outside it but the sun and the sky. Fittingly called the clearstory, this uppermost level let in the most light.

The increased height of the Gothic ribbed vault created one major problem: Since the outer walls of the church were generally no higher than the triforium, the buttresses built against them could not counter the thrust of the higher vault. The solution was the flying buttress, an arched support extending from the buttress to the vault, used for the first time on a massive scale at the Cathedral of Notre Dame in Paris.

Some scholars maintain that the flying buttress was intended to be a temporary shoring device - that the flying buttresses at Notre-Dame de Paris were placed against the vault to counter the thrust while the mortar set (which could take as long as two years) and that the masons planned to remove them later. But when the time came, the masons hesitated, unwilling to take the chance that mortar alone would hold up the church. The fact that those early flying buttresses in Paris were not decorated lends credibility to this theory. The master of Chartres was the first mason to decorate the flying buttresses as if they belonged to the overall design.

Moreover, the flying buttresses at Chartres are the first in the Gothic project to have been conceived not only as a structural feature but also as an aesthetic one – an integral part of the overall design.

"The buttresses of Chartres express conserved power," one historian of Gothic architecture wrote. "Those of the choir express a joyous release of energy as though they were the media of the creative outflow from the great mind immanent in the space of the interior."

It was a masterful melding of form and function. One of the great early experts on Gothic architecture, Eugène Viollet-le-Duc, would declare: "Chartres was the final triumph of the experiment on a very grand scale, for Chartres has never been altered and never needed to be strengthened."

With the addition of a pointed wooden roof, the Cathedral of Our Lady of Chartres was finished. Decoration on the columns was spare and simple; the clustered piers rose straight and unembellished; the stone was dressed and polished to a soft luster.

Even from a distance, the edifice is imposing - its unmatched spires soar over the roofs of the town. (The tower on Chartres West was the tallest structure in the town for hundreds of years. Then, in the sixteenth century, a taller and more ornate tower was added.) Its north and south transept portals are unusually large and decorated with large sculptured figures. The older statuary on Chartres West, however, is the most widely admired.

The basic work on the cathedral was completed in 1210. But

a surplus of funds enabled the master mason to spend an additional ten years on the project. During that time, he added porches lengthwise along the north and south sides of the nave. Contributions for the work came from some very auspicious donors. As von Simson notes: “The entire composition of the northern façade, consisting of the rose and lancet windows and exalting Mary and her Biblical ancestors, was given by Queen Blanche, the mother of St. Louis.” The south transept windows were paid for by Peter of Dreux, the duke of Brittany, whose munificence toward Chartres was particularly great, and in no small part inspired by political considerations.

Inside, there are niches with statues, painted and mosaic panels, screens, wood carvings, tapestries, jeweled vestments and vessels, golden candlesticks, and a variety of tastefully decorated elements. Most were paid for by Peter, who was both exalting the Virgin and paying tribute to his king, Philip Augustus, a well-known supporter of the cathedral.

Grand as it was when completed, it is not the statuary that evoked awe then, and still does today. It is not the paintings or the finely cut gems, nor the tapestry that bathes the interior in a light so pure it seems to shine directly from heaven. It is glass that has drawn admirers to Chartres for over 800 years - glass that moved the poet James Russell Lowell to write:

> I gaze round on the windows, pride of France!
>
> Each the bright gift of some mechanic guild,
>
> Who loved their city and thought gold well spent
>
> To make her beautiful with piety.

VIII

VOICES OF THE CATHEDRAL

Master Clement stood in the Chapel of All Saints at the new Cathedral of Chartres, shouting orders to apprentices as they measured and made diagrams of the window. Nearby, a shoemaker watched as the eminent glass painter worked, hanging onto his every word. He nodded from time to time, trying to look as if he understood what was going on. In fact, he never had been more confused in his life: What Clement was doing was a mystery.

The shoemaker was the representative of his guild, which - sometime after 1210 - had commissioned Clement to create a stained-glass window depicting the story of Saint Martin. Below it, a smaller window would show shoemakers at work. The windows were the guild's donation to the cathedral, and the shoemakers were nervous; though all of Chartres's guilds were donating windows, not all had gone to the extravagance of hiring a master of Clement's caliber.

Despite its concerns, the shoemakers' guild was grateful for the opportunity to invest its money in the window and to be part of something so grand. (Indeed, a hefty dose of mercantile self-interest – not to mention community and religious pride - proved a formidable combination to make the great Cathedral at Chartres rise from the ashes in less than twenty years.)

The shoemakers, of course, had always been a part of it. In any successful crusade, progress was dependent on civilian manpower. Hordes of laborers needed shoes to work in. That doubled the shoemakers' output. Similarly, weavers, bakers, tavern keepers, wine makers, blacksmiths, grocers, apothecaries, furriers, tanners, cobblers - all prospered from the traffic brought to Chartres by the rebuilding of the cathedral.

Although the town's craftsmen were essential to the project, they wished that their participation had been more direct. The cook knew his hearty meals were keeping the workmen well fed and energetic. But in a reflective moment, he might ask himself what stones, timber, or tiles he could identify as his own. The answer was none. All he was doing was getting rich from the rebuilding of the palace of the Holy Virgin.

Guild meetings gave members the opportunity to air such grievances in confidence. Many meetings must have been

devoted to the subject of what role their particular trade played in the rebuilding - and how those roles were pictured, on say, stained glass. The colored windows were in great demand, and because of their cost, at first, only wealthy nobles and merchants were able to afford them. But a collective effort made up of many small donations could put the lowly workers, in this one sense at least, on equal footing with their social and economic betters. Since many of the noblemen who had donated stained-glass windows to the cathedrals had images of themselves embedded on smaller windows below, the guild members saw no reason their visages should not be immortalized in the windows of Chartres.

Once the first few guild windows were installed, the other guilds were eager to join in the competition. Ironically, the masons, sculptors, carpenters, smiths, and other groups working directly on the building also took up collections and paid for a window or two. Even the lowly water carriers' guild contributed a chapel window. Poignantly, the members had their bent, bucket-bearing bodies represented in glass beneath the main subject that their donation paid for: a depiction of the life of Saint Mary Magdalene. Compared with those hunched water carriers, the knights, counts, and other wealthy contributors depicted elsewhere look pompous and unholy by comparison.

As work continued, contributions for windows came from a myriad of sources. Chartres "was the work of France and of all France, as no other great sanctuary had been before," wrote von Simson. Beyond those paid for by guilds, Simson noted gifts by many of the ancient feudal houses of the Île-de-France region – Courtenay, Montfort, Beaumont and Montmorency among them. "The counts of Chartres, but especially the royal house," Simson notes, "made great contributions."

But it was the scenes in the windows contributed by the workers' guilds that are especially apt. A top window might portray the life of Saint Paul's ministry in glass for all to see. But below the saint, the basket makers fashion their baskets just as openly. The Virgin prepares to receive the Magi in one window; in the corresponding scene, the bakers display their bread. The same bakers prepare their loaves under the figure of Moses – probably a medieval jest in light of the fact that

the prophet went for forty years without seeing or sampling a loaf.

This groundswell of professional generosity resulted in a cathedral with 175 stained-glass windows. Reports of their splendor spread across Europe, spurring the competitive bishops to enlist the glass painters of Chartres - or to send their own painters to the cathedral to study the windows. As a consequence, the thirteenth century saw a profusion of breathtaking windows in new cathedrals. The work at Chartres, however, was never equaled: The stained-glass windows there remain the most beautiful in the world.

"Other churches have glass," Henry Adams wrote, "quantities of it, and very fine – but we have been trying to catch a glimpse of the glory that stands behind the glass of Chartres, and gives it quality and feeling of its own . . . One becomes, sometimes, a little incoherent in talking about it; one is ashamed to be as extravagant as one wants to be."

The art of glass painting may have achieved its apotheosis at Chartres. But it was not the only art that lived side-by-side with the experimental and often profound work of the Gothic masons.

It was Gothic sculpture that achieved the greatest harmony with Gothic architecture. As the churches evolved, so did their statuary. The flattened, angular torsos of the chiseled bodies gave way to rounder and suppler forms. Hair, represented in the Romanesque period by circles knotted tightly against heads, began to loosen and fall free. Robes that had once been ribbed cylinders appeared to ripple on the statuary. Unseeing round eyes turned expressive and almond-shaped, and little smiles began to appear on lips of stone. Bodies, which had once been fixed inside stone niches, began to break away.

During the Cathedral Crusade, sculptors became more skillful - their figures more lifelike than any carvings since the Classical Age. They also became more impatient and independent - anxious to free themselves from the limitations of relief sculpture. (Almost no freestanding sculpture - "sculpture in the round," as it is called - was created in the Middle Ages. As they always had been, virtually all figures were painted with bright colors. Not until the Renaissance did

unpainted stone become conventional.)

The sculpture on Gothic cathedrals did a great deal to provide the consistency people expected in a place they visited often. Consider the pilgrims and parishioners, who regularly entered the Cathedral at Chartres through the older western portal, known as the Royal Portal. They knew almost without looking that kings and priests were flanking the door - and that the Virgin was enthroned in the center of the tympanum with Jesus on her lap. As they left through the Portal of the Last Judgment, they did not have to look back to see the images of heaven on the right side of Jesus or hell on his left - they knew.

There was an important difference in the Christ depicted in the sculpture around the Royal Portal at Chartres. "Whatever Christ may have been in other churches," von Simson observed, "here, on this portal, he offers himself to his flock as the herald of salvation alone. Among all the imagery of these three doorways, there is no hint of fear, punishment, or damnation, and this is the note of the whole time . . . the Church seems not to have felt the need of appealing habitually to terror; the promise of hope and happiness was enough."

Around the portals at Chartres, there was also a nod to the town's prominence in education. In the tympanum over the right-hand door of the Royal Portal, the Mother of God is enthroned, as she is throughout the building. But here she is surrounded by personifications of the liberal arts and sculpted figures of the great classical masters of each of the disciplines. "The rendering of this theme is the first in monumental sculpture," von Simson tells us. "The felicitous thought of coordinating this theme with the figure of Mary as the Seat of Wisdom bespeaks the ultimate goal and purpose of liberal studies at the Cathedral School."

In some ways, carvings representing the liberal arts were a departure from the main themes, which were, of course, religious and, usually, Biblical. In fact, as one writer remarked, "The Cathedral is truly a Bible in stone." A walk around the outside of Chartres reveals in three-dimensional stonework the entire story of the Bible, from Creation to the Last Judgment. But, as the years passed and the royal patronage continued, so did the sculpture. Much more was

added.

The North Porch, a triple-bayed entrance to one of the transepts, is a particularly rich repository of allegorical sculpture. It begins with the story of Paradise Lost, the original sin of Adam and Eve, sculpted into the outer archivolts of the central bay. From there, sculpture narrates the history of humanity from the beginning of the world to its expected end, with Jesus Christ standing at the center of time. Other central figures include Joachim, Mary's father, and her mother, St. Anne. In one scene portraying the Assumption, Mary reclines, her only Son's apostles grouped around her, one feeling her heart, and Christ holding her soul on His arm. The scene shifts to angels gently carrying Mary up from her sepulcher and into Heaven. There, she is seated and crowned as the Queen of Heaven.

But as time went by, some wider-flung subjects were introduced. For worshipers at Chartres, they were all there, carved in stone: their God, the saints who intrigued them, and the bishops and lords who protected them. Also, the knights they may have despised were represented alongside the merchants and craftsmen they envied. There were, in addition, the people with whom they worked, and the beggars. Perhaps the sheep they herded or the fox they had trapped were there too - the sculpture of this Gothic cathedral neglected no one.

Though there is a notable conservatism to the sculptures at Chartres, like all Gothic sculpture, it differed from the Romanesque in tone as well as in style. In the depictions of The Last Judgment, a favorite subject for cathedral portals, the hope of salvation rather than the conviction of damnation began to dominate. Symbols of the day indicated that salvation could be achieved through the pursuit of knowledge - not by unquestioning obedience to Church law as interpreted by the priesthood. The Second Coming of Christ was heralded; where he had once been a stern judge, aloof and majestic, he was now more human - a compassionate teacher, eager to forgive, to help, to teach.

One of the most meaningful changes in the sculpted figures was their posture. In Romanesque sculpture, the saints are stiff, sometimes glaring threateningly from their niches. The Gothic figures, in contrast, turn toward each other and toward

the congregation, as though sympathetically discussing the people in their midst. To a certain extent, this stressed the value of personal relationships and the importance of dialogue in the decision-making processes of life.

"The new image of man which is the work of the Gothic masters presents man as an individual endowed with free will," wrote William Anderson, and "who is seen as God and His angels look upon him . . . The Christian concept of the worth of the individual soul, a concept with which the Gospels and the Pauline Epistles are instinct, only achieved its first full expression eleven hundred years after the death of Christ, in the column statues of Saint-Denis and Chartres."

This was a part of the medieval mindset that produced the work. Men had worth. There was, to be sure, constant feuding among nobles throughout the few hundred years that gave us the Gothic. But when it came to the Cathedral Crusade, there was a surprising unity of vision and cooperation. The imposing yet sublime building design, the famously magical light of the windows, the many sculptures - some first rate masterpieces of their day - were created by devoted workers who labored side by side.

"The Gothic architect, sculptor, artist and painter of stained glass all had to devote their minds to the contemplation and manifestation of symbolic forms and archetypal images," wrote Anderson. "The greatest sacrifice must have been made by those artists and sculptors who came to . . . Chartres in the 1140s, having broken with the traditions of their Romanesque master and teachers, and about to undertake the transformation of images by which men and women lived."

IX

FROM DARK AGES TO ILLUMINATION

If the Gothic movement began around 1140 – led by the creative genius of Abbot Suger at his monastery - it spread geographically throughout France and beyond in the subsequent decades. While the style was most majestically embodied in the great cathedrals, it was also represented in other ways. The 100-year span after Suger began transforming Saint-Denis was one of the great transition periods in the history of European art. By the middle of the thirteenth century, a distinct Gothic style could be seen not only in architecture and its complimentary features like sculpture and stained glass, but in painting, tapestry weaving, and manuscript illumination.

The tapestries and the stained-glass windows in the great cathedrals were the artistic counterpart of murals painted in the buildings of later ages. Because the Gothic style was essentially architectural in character, the windows and tapestries assumed decorative roles only after they had established functional ones. They were architectural elements in a way paintings on walls could not be. Nevertheless, painting was a highly developed and widely practiced art, as evidenced by the beautifully illustrated manuscripts created by monastic scribes.

Those manuscripts would come to adopt the style and themes of that famous stained glass. Paradoxically, after developing for 100 years or so, the art of stained glass achieved a level of technical perfection that ultimately caused a decline of artistry.

When Master Clement went to work for the shoemakers' guild at Chartres, he employed the same basic methods used by the ancient Egyptians. Raw pigment was sandwiched between sheets of crude, unevenly blown, bubbled glass and baked until the color was sealed. Clement had no way of determining how much color would take and how much would melt away. To cut the glass to size, he used a clumsy hot iron that sometimes curled the edges and streaked the sheet. He varied the texture by applying acids to the glass without knowing precisely what effect the caustic substances would have.

These haphazard and primitive techniques produced imperfect glass that appeared determined to block the rays of the sun. The streaks, curls, bubbles, stains, and scars of the leaded

glass could not stop the incoming light, but they could slow it down, change it, and let it pass into the cathedral more beautiful than it had been during its long trip earthward.

Visitors to the Chartres cathedral, standing in place and turning slowly around, experience a world of light and color. There is the pale golden yellow of a sunrise and the blinding white of noontime on the ocean; the brilliant orange-red of a sunset; the silver blues of twilight; and the misty, filtered light of fog. All the light and color present every day on earth are present all at once in the windows of Chartres, thanks to the imperfect glass. Viollet-le-Duc, who would some years later work to preserve and restore some of the great masterpieces of the Gothic age, wrote of the stained glass work represented in Chartres: "The opaline light which comes in makes a sort of veil . . . Under the lofty vaulting is crossed by the brilliant tones of the windows behind, which give the play of precious stones. With every hour of the day these effects are altered, and always with new harmonies which one never tires of trying to understand; but the deeper one's study goes, the more astounded one becomes before the experience acquired by these artists . . ."

Gradually, the technique was perfected - to its detriment. In large workshops, artists learned to use heat and pressure to tint the glass evenly. They ironed out the bubbles and kept the edges from curling, removed the scars, and made the glass smooth and transparent. Master Clement, despite his title of glass painter, had used little paint, causing his successors to fill in more and more of the details in translucent paint. The perfected glass did not challenge the sun but allowed it to pass through as if it were not there at all.

The age of the great stained-glass windows was short, but its fruits were abundant. Hundreds of years later, the people of Europe took great care to preserve the fragile masterpieces. Threatened by Nazi invasion in the late 1930s, the citizens of the major cathedral towns of France and Belgium removed the glass, piece by piece, from the window casings, wrapped them individually, and stored them in secret places known to only a few. Chartres was no exception. After the war, the famous windows were reassembled and put back in place. At a ceremony to celebrate their return, the current bishop thanked God for sending them back. Standing near him was

the commander in chief of the Allied forces that had liberated France from Nazi occupation, General Dwight Eisenhower, who was heard whispering that he deserved some credit, too.

Like the art of stained glass, the art of tapestry weaving also reached a peak in the Western world during the Cathedral Crusade. While their primary function was structural, the tapestries were intricately stitched with stories of the saints and prophets.

The interiors of Gothic cathedrals had no walls separating one section from another. That was considered an artistic virtue. But the openness was frequently unsuited to the rites and ceremonies and meetings. Heavy hanging tapestries provided the solution: They could be stored in the crypt and hung as needed. They could be hauled outdoors for civil ceremonies, presented to visiting kings as gifts, even used as road markers. Hung inside the portals, the tapestries also protected parishioners from inclement weather.

Because of increased demand for their product, the thirteenth century was a period of learning for Western European weavers. The first tapestries produced in their workshops were patterned with simple geometric shapes. Early in the 1300s, symbols of heraldry began to appear on heavy rugs that were carried as banners at the head of a lord's entourage. Small animals and birds soon made their way into the warp and woof of the weave. But progress was slow: To correct a mistake in a tapestry was a monumental job, often requiring the unraveling of much, or all, of the rug.

The response to the new tapestries was phenomenal. Because the rugs were exorbitantly expensive, pretentious aristocrats collected them and displayed them in specially designed wagons so all could admire their wealth. King Charles V of France, his three jealous brothers, and their legion of aristocratic hangers-on scattered from Paris to Flanders to find *tapissiers* to weave more and better tapestries. The demand was too great for most of the workshops to handle, and that, as it turned out, was a blessing.

Caught up in the fad for collecting, the supercilious courtiers surrounding Charles V avidly searched out the rare and the expensive. To many, their beauty was immaterial: If a tapestry looked expensive, it was worth owning. After the

novelty of the figured tapestries wore off, the nobles began to pressure the workshops to design richer-looking rugs, incorporating golden thread, perhaps, or a tighter weave. Two centuries later, when times were bad and the tapestry business had fallen off, the weavers would compromise their art by attempting to make their tapestries look like paintings. Fortunately, at the dawning of the era, business was so good that the *tapissiers* could afford to be independent. In fact, patrons took care not to offend the artists lest they refuse commissions altogether.

The weaving workshop at Arras in northern France became so famous that in Europe, its name became synonymous with quality tapestries. Regretfully, only one confirmed Arras tapestry remains, and it is incomplete.

Commissioned for the Cathedral of Tournai in Belgium, where a fragment remains preserved to this day, the tapestry tells the story of St. Piat and St. Éleuthère. Oddly, the saints are clad in fourteenth-century apparel - not in the third- and sixth-century garments the saints really wore. The weaving style is an excellent representation of the craft in the Gothic age.

Architectural elements and figures are grouped closely together, leaving empty space elsewhere. This type of composition is commonplace in tapestry because the *tapissiers* were interested in preserving, not concealing, the flatness of the tapestry.

One Gothic style of tapestry developed later than other forms of Gothic art. The reason for this was that larger woven rugs did not appear in Europe until the crusaders brought them back from the Middle East. Some monks had learned to operate looms but without the expertise required to produce anything near the scale of Islamic tapestries. Weavers and drapers were familiar with the technical aspects of the weaving process, but their specialty was the manufacturing and tailoring of fabrics –not rugs.

In the decade between 1360 and 1370, with the proliferation of large, well-organized workshops, the art of weaving finally caught up with the Gothic age. Even by today’s standards, the medieval tapestry workshops - especially in northern France and Flanders - were highly industrialized operations

that incorporated mass-production techniques.

The *tapissiers* were willing to experiment - and considered any money lost as an investment. They developed charting systems to replicate the standard weaves whenever needed. In addition, they updated the old patterns by replacing simple animal and human shapes with scenes depicting Bible stories, knights in battle, landscapes, troops of minstrels, or scenes from everyday life.

At the beginning, most of the pictures were copied from old illustrated manuscripts, but it wasn't long before the *tapissiers* began to design their own.

For reasons that are rather vague, the tapestries in the great cathedrals tend to deal less with religious subjects than the windows and the sculpture. (It may have been that the tapestries were donated by noblemen, who preferred secular subjects.)

The final beneficiary of Gothic influence, manuscript illumination, had already been practiced for centuries before the Cathedral Crusade began.

There were many regional styles, and most of them were strongly affected by Byzantine art. These craftsmen were mainly employed in illustrating Bibles, followed by private devotional books called psalters (their owners often had some religious vocation). The most sumptuous of these are, in effect, expensive picture books with long series of illustrations as preface to the main text. In the twelfth century, these were richly decorated.

By the fourteenth century, the influence of the building boom had trickled down into manuscripts. A psalter said to have belonged to Blanche of Castile, the mother of Louis IX, who died in 1252, includes many illustrations resembling the stained glass of the soaring cathedral clerestories.

But it was a later Gothic building innovation that would come to bear great influence on manuscript illumination as the thirteenth century progressed: the rayonnant style.

In simple terms, rayonnant architecture was less concerned with structural or engineering issues and more concerned with the decorative possibilities of two-dimensional surfaces,

such as the repetition of certain motifs at different levels and scales. These new designs were most successfully used in the windows of the cathedrals in Reims and Amiens - both built between 1210 and 1270. It is called rayonnant on the basis of the radiating design of the piercing of the rose windows, the circular glass openings that became common above entrance doors and in transepts.

The rose window dated back to Abbot Suger's Basilica of Saint-Denis. But as time passed, builders began to concentrate on the design of the stone frameworks, which form and decorate the openings of the windows - making them gradually more elaborate. That style of decoration moved easily from windows to paper.

In the psalter belonging to King Louis IX, who ruled during the construction of the cathedrals of Reims and Amiens, there are seventy-eight full-page illustrations of scenes from the Old Testament. Each page contains a row of figures topped by an architectural canopy derived in the style of the rayonnant, with pinnacles, traceried windows, and two large gables containing a rose window. Many of the motifs developed on the drawing boards of the architect-masons had been transferred to the book illustrator's vellum.

In a broader sense, the same was true in all the arts of the period: The innovative spirit of Gothic architecture spread widely. Just as the master masons conceived of a new way to build, the creative impulse of workers in all mediums was guided by a new aesthetic and achieved through novel means and techniques. And it was hardly limited to the region around Paris where the Cathedral Crusade began.

X

THE GOTHIC MOVEMENT TRAVELS

Much of the development of the Gothic style had sprung from destruction. Because of fire, Abbot Suger reconsidered the style of Saint-Denis and instigated the change from Romanesque gloom to the soaring illumination of the pointed arch and ribbed vault. If not for the conflagration of 1190, Chartres Cathedral might never have achieved the transcendent combination of illuminated glass and inspiring sculpture.

Fire would be a factor in bringing the Gothic style to England, but it was also caused by one of the most famous murders in British history.

A sword's crushing blow ended the life of Thomas Becket, archbishop of Canterbury, as he struggled on the steps of the altar of his church one December evening. The brutal event sent a tremor through medieval Europe. Public opinion at the time - and subsequent history - blamed the murder on Becket's former close friend, King Henry II.

Becket was born in France in 1118, the son of an English merchant. His family was well off, and Becket benefited from his family's status by being sent to Paris for his education. From there, he joined the English household of Theobold, then archbishop of Canterbury. Becket's administrative skills, charm, intelligence, and diplomacy propelled him forward. The archbishop sent him back to Paris to study law and upon his return to England made him archdeacon of Canterbury.

In 1154, Theobold introduced him to the newly crowned king, Henry II. The two hit it off immediately, their similar personalities forming a strong bond between them, and Henry named Becket his Chancellor. Archbishop Theobold died in 1161, and Henry immediately saw the opportunity to increase his influence over the Church by naming his loyal advisor to the highest ecclesiastical post in the land.

Finally ordained, Becket's allegiance shifted from the court to the Church, inspiring him to take a stand against his king. Seeing the writing on the wall, Becket fled to France where he remained in exile for six years, just as the Cathedral Crusade was gaining impetus and fervor in the Île de-France region. The two former friends appeared to resolve their dispute when King Henry and Becket met in Normandy. On November 30, Becket crossed the Channel, returning to his post at

Canterbury. Earlier, while in France, Becket had excommunicated the bishops of London and Salisbury for their support of the king. Now, Becket remained steadfast in his refusal to absolve the bishops.

This news threw King Henry (still in France) into a rage in which he was purported to shout: "What sluggards, what cowards have I brought up in my court, who care nothing for their allegiance to their lord. Who will rid me of this meddlesome priest?"

Though the king's exact words have been lost to history, his outburst had the effect of inspiring four knights to sail to England, determined to rid the realm of this annoying prelate. They arrived at Canterbury during the afternoon of December 29 and immediately searched for the archbishop. Becket fled to the Cathedral where a service was in progress. The knights found him at the altar, drew their swords and began hacking at their victim, finally splitting his skull.

Buried in a crypt in Canterbury, Becket was soon canonized by Rome. Almost immediately, several miracles were said to have occurred at the tomb of the martyr. Soon, hordes of pilgrims transformed Canterbury Cathedral into a shrine. (Even King Henry, shaken by the reaction to his former friend's murder and trying to atone for his alleged crime, spent a night in the martyr's crypt.) As had the remains of St. Denis at Abbot Suger's monastery and the relics of the Virgin at Chartres, the allure of Beckett's remains made Canterbury a prestigious and economically important location. (St. Thomas continued as a popular cultist figure for the remainder of the Middle Ages.)

So, in 1174, when a fire destroyed much of the Cathedral above St. Thomas's crypt, there was great incentive to rebuild the structure quickly and make it a fitting edifice to its newfound importance. It would prove to be an opening for the Gothic movement to sail to England.

Assured that their new prestige could demand funding, the monks of Canterbury summoned French and English master masons to advise them.

They hoped that a new cathedral could be built on the piers of the old, but a number of builders said it was impossible.

Frenchman William of Sens did not go along with the pack. (He was not only a skilled builder and engineer but also a clever politician.) After he was awarded with the job of rebuilding Canterbury, he convinced the monks that though he would keep some of the foundation of the original structure surrounding the remains of St. Thomas, much more of the old building should be torn down and replaced than he had originally proposed to land the job. What it would be replaced by was a new church designed in the style of the Novum Opus.

William oversaw quick progress on Canterbury – from the mining and transport of stone from Caen to the introduction of marble adornment on the support columns in the new choir, a technique he had learned at building projects in southern France. One day, as he surveyed work on the scaffolding of the vaults, William fell to the floor and was seriously injured. Left a cripple, the master tried to supervise work from his sickbed, but finally gave up and returned to France.

He was succeeded by another William, this one an Englishman, who would complete the work of rebuilding Canterbury as a Gothic structure within ten years. Canterbury was such a prestigious place in the island nation that very soon all new church buildings, and much of the rebuilding of existing structures, would be done in the Gothic style.

For the next three centuries, not only large cathedrals like Chichester but also thousands of parish churches throughout England and Scotland (and sometimes Ireland) would adopt the style introduced by William of Sens.

While the influence of the great French churches like Chartres was considerable, it was not total. As time passed and building progressed, the English and Scottish Gothic style developed peculiarities of its own. Patterns and ornamentation took on a local flavor, sometimes depending on the indigenous materials. For instance, England had many quarries of Purbeck marble, which is dark metamorphosed limestone. It was used to great effect in England, though there was nothing like it in France.

Some structural differences also appeared, most notably that the vaults of the naves in English cathedrals were generally

lower than their French counterparts. Something in the English psyche made parishioners more impressed by long processions through a lowered nave rather than soaring vaulted ceilings. That lowered vista was often counterbalanced by embellishments like richly decorated column ribs and intricate carvings that were visible from ground level.

While England was creating its particular adaptations to the Gothic Movement, the style also entered other European countries. By the middle of the thirteenth century, Paris had become a large and wealthy city. Among its population of 200,000 were many goldsmiths and metalworkers, wood carvers and manuscript illuminators, all working in the new style. The artifacts of the Paris workshops were exported to all parts of Europe. Meanwhile, the University of Paris became a magnet for intelligent young clerics from far outside France, men who would later return to their own countries and become influential, decreeing that new buildings should reflect the new style – the opus francigenum (work of France) as the Gothic style would come to be known in Germany.

Of course, as the Gothic style spread through other countries in Europe, ancient national traditions often dictated the nature of a particular regional style. For instance, German culture venerated its glorious imperial past about equally with its veneration of God. Consequently, many German churches – notably those in Bamberg and Naumburg – had a west façade that mirrored the east façade. In the French style, the east façade, which symbolically represented God by its nearness to the Holy Land, was always more impressive than the west façade, that symbolized the crown, and often contained what was known as the Royal Portal. Germans balanced the glory of the state with the glory of God. That balance meant that a parishioner entered the church not from the west, as was typical in France, but from the south, and therefore was not treated to the long vista down the nave. Moreover, the naves in Bamberg and Naumburg were constructed with a severe lack of ornamentation.

In general, the Germans were more enamored with the older Romanesque style and kept many of its traditions, even as buildings transformed into what would be considered Gothic. One classic example is the cathedral at Freiburg, which provides an excellent illustration of a specifically German

development in the Gothic style.

Construction began around 1200 with the erection of a purely Romanesque chancel and transept. During the thirteenth century, a Gothic nave was added, modeled on that of the cathedral in neighboring Strasbourg. But the architectural possibilities of the Gothic style remained largely unexploited: The nave, although higher than the Romanesque transept, is low compared to French Gothic naves; the clerestory windows are relatively small so that the wall continues to be a structural element in its own right. Buttresses and flying buttresses are almost provincially plain and in no way shroud the rigidity of the structure. In about 1350, the Romanesque chancel was replaced by one of High Gothic design with radiating chapels and vaults. These three stages of development, Romanesque transept, Early Gothic nave and aisles, and High Gothic chancel, can be easily identified to this day by their differing heights.

Perhaps Germany's most important contribution to the history of the Gothic movement was the brick structure.

It originated in northern Germany, where an absence of natural sandstone - combined with the lack of efficient transport - made it necessary to build in brick in order to satisfy the demand created by the rapid growth of the northern German towns. (The so-called Hanseatic League.)

The structural advantages of brick were soon recognized and at the beginning of the thirteenth century, sacred and civil architecture in that part of Germany developed brick construction in a highly original way. The simplicity of brick structures, dictated by the building material, proved to be better suited to the northern German plains than the splendor of sandstone structures in French and English towns.

The Gothic style began to infiltrate civic building from Germany to the Low Countries, the Netherlands and Belgium, and then into Italy. Civic pride was strong in those countries, which drove the residents to erect magnificent city halls, fountains, and gates. Of course, just as the early cathedral builders in France had competed to build the tallest temple to God, they tried to outdo the neighboring towns in height.

In France, the race into the sky had culminated in the Saint-

Pierre Cathedral in Beauvais, where a tower soared nearly 450 feet. Ambition proved to have outpaced engineering, however, and the tower collapsed in 1284. In Strasbourg, where the cathedral not fully completed until 1439, the northwest spire rose to 472 feet.

It was the highest building in the world for some 400 years.

Secular concerns also had great influence on the way in which the Gothic spread south from France into Italy and Spain. For some years, the Alps formed a sort of natural barrier to the Novum Opus making its way south toward Italy. And though Rome was the center of the church, many regions in Central and Northern Italy were constantly in strife, both with the Roman Church and with each other. This led to resources that might have been devoted to religious construction going instead to castles for political leaders. The most famous of these was the Doge's Palace in Venice, which was initially a Byzantine wood structure, rebuilt after fires in a unique, yet firmly Gothic style.

That famous structure was begun in the first year of the fourteenth century, and it took a full 123 years until the first Grand Council sat in the finished Gothic building. The façade, seen from St. Mark's Square, is often described as Venetian Gothic. It includes the so-called Giants' Stairway, named for the figures at the top: colossal statues of Neptune and Mars typifying the strength of Venice by sea and in war. Over the arch at the top of the staircase is the Lion of St. Mark. On the top stairs, the doges, or rulers of Venice, were crowned.

In this palace, everything was elaborate: The materials were rich and the carvings ornate. One singular feature of the Doge's Palace: Its front is built of marble of various colors arranged to produce a pattern. The best colors for a building are those of natural stone. One of history's greatest architecture writers, John Ruskin, said that the front of the Doge's Palace at Venice is the purest and most chaste model of the fit application of color to a public building.

Indeed, what distinguished the Italian Gothic is a much wider range of building materials, contributing variety and zest. As Ruskin described it: "Sometimes when walking at evening on the Lido, whence the great chain of Alps, crested with silver clouds, might be seen rising above the front of the Ducal

Palace, I used to feel as much awe in gazing on the building as upon the hills, and could believe that God had done a greater work in breathing into the narrowness of dust the mighty spirits by whom its haughty walls had been raised, and its burning legends written, than in lifting the rocks of granite higher than the clouds of heaven, and veiling them with their various mantle of purple flower and shadowy pine."

Like the Alps in Italy, the Pyrennees Mountain range that separates France from the Iberian Peninsula is a natural obstacle that slowed the Gothic movement into Spain. Also, Spain at the time was a collection of often warring kingdoms, and though Catholicism was prevalent, the religious culture was diverse, with large and strong Muslim and Jewish populations.

When the Gothic style did arrive with the beginning of construction of a cathedral in Burgos in 1221, Castilian architecture was basically French-inspired, although a distinctly native taste exists in the proportions and more ornate decorative features. Cathedrals similar to Burgos would rise in Toledo, and León, the last remarkable also for its stained glass. Catalan Gothic architecture, exemplified in the cathedrals at Barcelona and Palma de Majorca, made distinctive use of wide naves with two side aisles instead of the usual four; they have heavy interior buttresses and lateral chapels. At the church in Girona, the aisles were suppressed altogether, so that the cathedral had one of the widest vaulted spans of medieval Europe.

A pervasive element in Spanish variation of Gothic is the Mudéjar style, whose influence lasted beyond the Middle Ages and into the eighteenth century. The name comes from the common appellation for individual Moors or Muslims who remained in Iberia after the Christian re-conquest but were not converted to Christianity. Instead of stone, the favorite materials of the Mudéjar builders were brick, plaster, and wood, which they used with much versatility. Their decoration is distinguished by the use of the elaborate geometrical configurations and stylizations associated with most Islamic art. A Moorish influence could be found in many Spanish churches. In Seville, the main cathedral is the biggest and widest of all Gothic cathedrals, and it was built on the foundations of an old mosque.

All of these variations on Abbot Suger's original ideas served to enhance the Gothic style, not dilute it.

Among all the differences was a unifying principle: the creation of a different kind of space in which to worship God. From the snowy reaches of Germany to sun-drenched cities of Spain, the Gothic builders shared a sense of soaring spirituality. From Chartres to Canterbury to Strasbourg and Toledo, "the great buildings were designed to express through carefully calculated spatial effects the totality of man," wrote one perceptive scholar. "They derive from the highest states of consciousness of which men are capable and they are deigned to alter and expand the awareness of everyone who sees and enters them."

XI

THE ENDURING GOTHIC

From the time of Abbot Suger's church until now, Gothic sanctuaries have been built and rebuilt, with each European nation stamping its imprint on the evolution of the style.

There are masterpieces of the style – with various adaptations - in cities as far flung as Bruges and Barcelona. But gradually, the burning fire of devotion that fueled the Cathedral Crusade would flicker and fade.

"The religious fervor which was so marvelous an inspiration to the Middle Ages in the ascendant," Gimpel observed, "and which made them one of the greatest periods in the history of mankind, was to lose its intensity . . . Religious and creative fervor had died down, and at the same time the technological and economic boom came to a near standstill."

It is impossible to fix an exact date for the start of decline. It might have been 1315, when famines plagued Europe for two years. Louis X of France had freed all serfs that same year, and soon there would be peasant revolts in other countries.

These latter years of the Middle Ages had also seen deterioration in the spiritual health and authority of the Catholic Church. The papacy was in disarray, beginning with a disputed election that saw cardinals fighting in the street and the eventual establishment of three rival popes. In others words: The moral force and economic influence that launched and nurtured the building boom virtually disappeared. For a full century, historian Morris Bishop would observe, "the church exhibited to the world a spectacle of disunion, intrigue, incompetence and corruption in place of the spiritual and moral leadership for which men longed."

And in the midst of that century came plague, which within a few years in the mid-fourteenth century, had killed between a third and a half of Europe's population. If plague were not enough, in 1348, the kings of England and France initiated a war that would spread through the continent and eventually last 100 years.

But in a practical sense, and for the sake of argument, the year 1421 could be fixed as the end of the Gothic period. That was when the Medici family, emerging as the unrivaled power of the city-state of Florence, commissioned a man named Brunelleschi to design a building.

Ironically, Filippo Brunelleschi had come upon a set of rules and principles for building drawn up by Vitruvius, who had influenced several generations of French masons in the beginning of the Cathedral Crusade, including Villard de Honnecourt.

Brunelleschi, himself an architect and accomplished sculptor, was fascinated by Vitruvius's writings - especially their logic, clarity, and simplicity. In Rome, Vitruvius had measured the proportions of ancient buildings - now in ruins - to calculate the system used by ancient builders. He studied every detail and wrote down his discoveries, which became the guidelines for a new generation of architects. The lessons that Brunelleschi took from the writings of Vitruvius were somewhat different from those of Villard. In fact, as Renaissance historian John Hale notes, "Vitruvius helped enthusiasts for classical details to see how they used to give harmony and expression of functions to buildings of different types; religious, domestic, festive or defensive. And by providing such a rationale, he helped to rally anti-Gothic sentiment."

The structure Brunelleschi designed for the Medicis in Florence is widely considered the first of the new age called the Renaissance. Even before its completion in 1445, its impact reverberated throughout the Italian peninsula into southern France. Soon, word of it spread throughout Europe.

It was not, however, the Neoclassical style of the new architecture that doomed medieval architecture - nor was it the simplicity of Brunelleschi's building or the public's ready acceptance of it. Most significantly, the first building of the Renaissance was not a great cathedral, a palace, a castle, or a country villa. It was a "foundling hospital" - a home for the orphaned and neglected children of Florence. In some ways, starting here, The Spirit of Man would become as powerful a force for creation as the Spirit of God.

For 1,000 years, people had been told that life was a test - that sacrifice was required to ensure everlasting happiness, and that pain, hunger, deprivation, and degradation were a small price to pay for the reward to come. For ten centuries, the banner of Christianity had flown over a society whose justification for its inhumanity and brutality was that life mattered little, except as a test of faith.

By building a foundling hospital, Brunelleschi gave voice to the miserably oppressed peasants. Its construction declared, in effect, that the poor and helpless were entitled to a home and food and warmth and companionship in this life - not only in the next - and that charity was akin to worship. While not a church, the first building of the Renaissance was very much a Christian edifice.

Florence's foundling hospital may have heralded the end of the Middle Ages, but the fire of the Cathedral Crusade was never completely extinguished. The Gothic style may have eventually lost its potency as a vital force in art, but it never entirely disappeared.

While displaced for several centuries by the Renaissance-era reemergence of classicism, the Gothic style began to attract renewed attention during the eighteenth century.

Something was in the air. Consider this passage from Johann von Goethe in his writings on art after studying the famous cathedral in Strasbourg: "Having grown up among the critics of Gothic architecture, I nursed a distaste for its frequently over-laden and confused ornament, whose arbitrary character increased the repugnance I felt for the gloomy religious aspect of the style . . . Now however, I felt I had experienced a revelation, since here there were none of those defects, but rather the force of impression of their opposite.

The more I looked and reflected, the more I felt I was discovering still greater merits in what I have described. I had picked out the just proportions of the larger division with their decoration, down to the smallest details, as meaningful as it was rich; but now I recognized the links between these ornaments, the bridge between major member and another, the interweaving of details similar, yet highly varied in their form, from saints to monster or leaves to scallops. The more I investigated the more I was astonished . . ."

Goethe lived a long life that spanned the last several decades of the eighteenth century and the first of the nineteenth. His thinking was something of a bellwether. By the middle of the nineteenth century, a full-fledged Gothic revival was flourishing in Britain, inspired and encouraged in large part by John Ruskin, the architectural expert who was so taken with the Doge's Palace in Venice.

His interest in medieval architecture was aroused by travels throughout Europe, during which he made detailed watercolor studies. Ruskin was particularly interested in the decoration and color of buildings. His two most important books, *The Seven Lamps of Architecture* and *The Stones of Venice*, both written in the mid-nineteenth century, had an enormous impact on the Gothic Revival. Ruskin advocated a return to the spiritual values of the Middle Ages, which he felt had been lost in the mechanized and materialistic age in which he lived.

In *The Stones of Venice*, Ruskin wrote: "What characters . . . did the Gothic builders love, or instinctively express in their work, as distinguished from all other builders? Let us go back for a moment to our chemistry, and note that, in defining a mineral by its constituent parts, it is not one nor another of them, that can make up the mineral, but the union of all. . . . So in the various mental characters which make up the soul of Gothic. It is not one nor another that produces it; but their union in certain measures. Each one of them is found in many other architectures beside Gothic; but Gothic cannot exist where they are not found or, at least, where their place is not in some way supplied. Only there is this great difference between the composition of the mineral and of the architectural style, that if we withdraw one of its elements from the stone, its form is utterly changed and its existence as such and such a mineral is destroyed; but if we withdraw one of its mental elements from the Gothic style it is only a little less Gothic than it was before, and the union of two or three of its elements is enough already to bestow a certain Gothicness of character. I believe, then, that the characteristics of Gothic are the following, placed in the order of their importance: 1. Savageness or Rudeness. 2. Love of Change. 3. Love of Nature 4. Disturbed Imagination. 5. Obstinacy. 6. Generosity. And I repeat that the withdrawal of any one, or any two will not at once destroy the Gothic character of a building, but the removal of a majority of them will."

Though it was the age of steam and buildings were being constructed with steel rather than stone, Gothic buildings dating back to the twelfth century became a major source of inspiration to nineteenth-century designers. Typical features of High Victorian Gothic are exuberant forms and decoration, turrets, polychrome brickwork, gables, pointed arches, bay windows, elaborate porches, and other medieval details such

as decorative corbels and gargoyles, stained glass, and patterned floor tiles. Architectural elements such as pointed arches, steep-sloping roofs and decorative tracery (the ornamental patterns that were used so effectively in the rayonnant) were applied to a wide range of Gothic Revival buildings and objects.

A new crusade would sweep across England, and with its growing imperial power, money was available, both for secular and ecclesiastical buildings. By now, the medieval master mason had been replaced by the professional architect. Two of the Gothic Revival's main practitioners, Sir George Scott and George Street, between them designed and built more than 1000 Gothic-style buildings in mid-nineteenth-century Britain. Many were churches, but notable secular examples included the Martyr's Memorial in Oxford and the Midland Hotel near the St. Pancras train station in London.

And the spirit of the Middle Ages began to seep into other aspects of Victorian life. Renewed interest in medieval chivalry led to the incorporation into designs of heraldic motifs found in coats of arms. Furniture with elaborate painted scenes became a hallmark of the Gothic Revival style. And in the second half of the nineteenth century, there was great fascination for historical costume, particularly that of the Middle Ages. Fancy dress events and parties were extremely popular.

A similar fascination with various manifestations of the medieval cultural spirit had already come into vogue in France almost a century before. But its popularity died with the revolutions of the late eighteenth century when there was wholesale destruction of the Gothic masterpieces that had been created in France because revolutionaries felt they embodied the oppressive entrenched power of the aristocracy and the church.

Then, right around the turn of the nineteenth century, the influential French thinker François-René de Chateaubriand wrote a treatise called *The Genius of Christianity*, which sought to revive appreciation for what he called "the spirit and beauty of the Christian religion," and particularly its embodiment in those soaring Gothic churches that dotted the French countryside and still dominated the skyline of French

cities. When Victor Hugo published *Notre-Dame de Paris* in 1831, it heightened the revival of appreciation of the Gothic in the country where it was created.

However, in France, where the style had sprouted in a ring around Paris centuries before, the impetus went toward restoring the old church buildings. Soon after Hugo's book, France established a Historical Monuments Commission, and, appropriately, one of its first projects was to restore the shaky north tower of Saint-Denis, where Abbot Suger had conceived of the unique and revolutionary combination of height and illumination almost exactly 700 years before.

To the many who study it, Gothic architecture is the standard by which all later styles must be measured. Just as the original Gothic movement spread through Europe, the Gothic Revival had its proponents in Germany, the Low Countries, and to a much lesser extent, Italy.

But now, though, there was a whole new land, and Gothic architecture began to appear in America in the middle of the nineteenth century, most notably with architect James Renwick's designs for the Smithsonian Institution, and later St. Patrick's Cathedral in New York City. For many decades, one of the most famous and prolific architects in the United States, Frank Furness, was a true proponent of the Gothic Revival. Even as technological advances changed building, and as America became a world power and financial center, the Gothic influence did not disappear. In 1910, in lower Manhattan's emerging financial district, the Woolworth Building, built of steel with a light terra cotta cladding, was nothing if not a Gothic cathedral tower raised to the dizzying heights of the twentieth century. And in keeping with the new forces of the age, the marvelous illumination of the building came not from sun streaming through stained glass, but powerful electric lights.

Though the most famous and revered Gothic structures will always be in Europe, particularly France, the United States has helped maintain the flame of the Cathedral Crusade. Even today, Gothic remains the "official" architecture of Christian churches in the U.S. While relics are no longer a standard feature in churches, a modern day pilgrim who wished to see the Gothic style in all its glory could simply drive through a few states on America's Eastern Seaboard.

In Pittsburgh, Pennsylvania, stand three churches designed by the American Gothic master architect Ralph Adams Cram, who worked in the decades before World War II. Cram, who was not university educated, was such a purist to the medieval style that he sought out stained glass craftsmen who could recreate the less technically advanced, and more "primitive" glass style that one would see at Chartres.

In Washington, D.C., the Cathedral Church of Saint Pater and Saint Paul, more familiarly known as the National Cathedral, a structure that took eighty-three years to build, rises majestically at the corners of Wisconsin and Massachusetts Avenues. Though at 555 feet the Washington Monument is a taller structure, the top of the cathedral's 301-foot tower is the highest point in the nation's capital city.

What may be the last great Gothic cathedral project is still underway on the upper west side of New York: the perennially unfinished Cathedral of St. John the Divine. It is a titanic building that owes a large part of its design to Cram, who, one critic wrote, had "profound insight into the logic of Gothic design, along with a determination to avoid antiquarianism and make Gothic a living tradition again."

Cram himself once wrote, "I for one must hold that Gothic architecture, as we call it, is something greater than a structural incident. It is the trumpet blast of an awakening world, a proclamation to the four winds of heaven that man has found himself, that years of probation are accomplished, the dark ages extinguished in the glory of self-knowledge; in a word, that Christianity has triumphed over paganism, the Catholic faith over heresy."

St. John was conceived by the Episcopal bishop of New York, Reverend Horatio Potter, in 1872. Though the Gothic Revival was still going strong then, Potter originally chose a design that was more in the Byzantine-Romanesque style. The cornerstone was laid on St. John's Day, December 27, 1892, and it took seven years until the foundation work was complete and a first service could be held in the church's underground crypt.

Building one of the largest churches in the world and using true Gothic building materials and methods to do it would prove a time-consuming endeavor. It wasn't until 1916 that

ground was broken for construction of the nave. By then, Cram had been brought in to supervise the design, and he shifted to a classic French Gothic style. Construction continued through World War I and the Depression. The first services in the nave were held the day before the bombing of Pearl Harbor. America's participation in World War II brought progress to a pause that would last more than three decades. When work resumed in 1979, it was under the auspices of an economic development program to preserve the craft of stonemasonry by training neighborhood youths.

Construction slowed and then stopped in the new century. But still, when church officials are asked when the giant cathedral will be finished, they answer, "Maybe in a hundred years." Despite its unfinished state, a *New York Times* writer observed in recent years "it is not difficult to get caught in the spirit of the cathedral as a living, even growing, thing."

So, the Gothic lives on. Of course, the spirit of the age from which it sprang can never be duplicated. Modern times are hard pressed to produce men like Abbot Suger, who are at once shrewd actors on the political stage, accomplished scholars, and religious mystics. And our secular and atomized age may never achieve a unity of spirit and purpose comparable to that inspired by the force of the Virgin Mother, which achieved its crowning glory at Chartres.

But perhaps most of all, the great paradox of the Middle Ages may never reappear, when stifling traditionalism mixed with practical innovation to create a new spirit and new work – the Novum Opus.

"Of all the monuments to human effrontery," the scientific historian Jacob Bronowski wrote, "there is none to match those towers of tracery and glass that burst into the light of northern Europe" during the Cathedral Crusade.

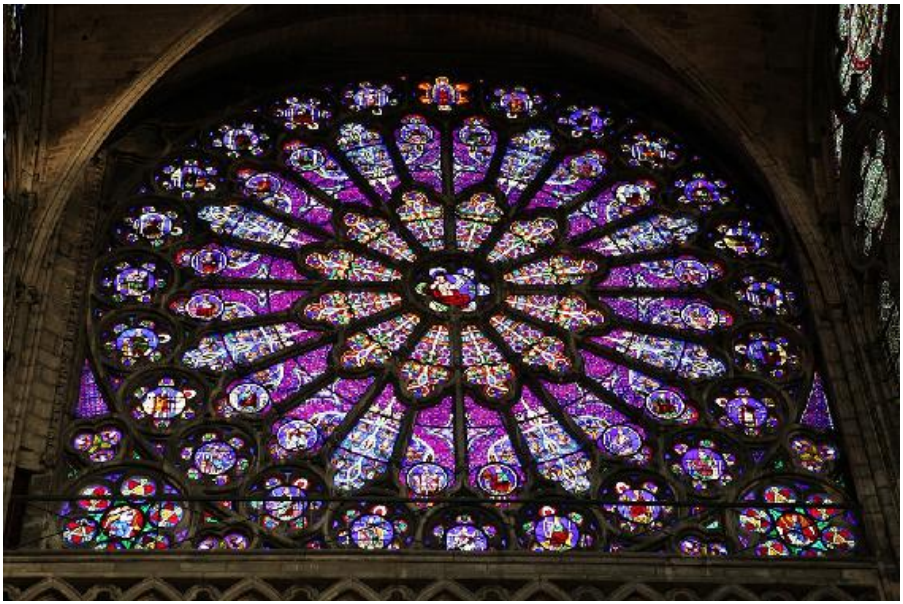
"The construction of the huge defiant monsters is a stunning achievement of human foresight and human insight," Bronowski said, for they rose long before builders fully understood the mathematics that made them possible. "One has the sense," the scientist adds, "that the men who conceived these high buildings were intoxicated by their newfound command of the force of stone."

All these centuries later, the power of those buildings is as intoxicating as ever.

GALLERY

Abbey of Saint-Denis in Saint-Denis, France

Abbey of Saint-Denis

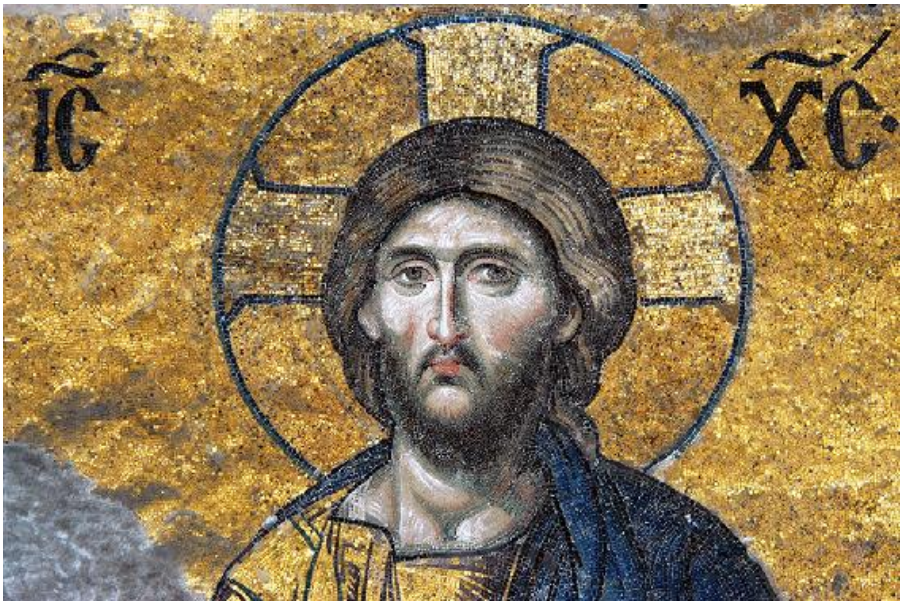


Abbey of Saint-Denis

Abbey of Saint-Denis

Hagia Sophia in Istanbul, Turkey

Hagia Sophia



Byzantine mosaic of Jesus, Hagia Sophia

Mary with the baby Jesus, Hagia Sophia

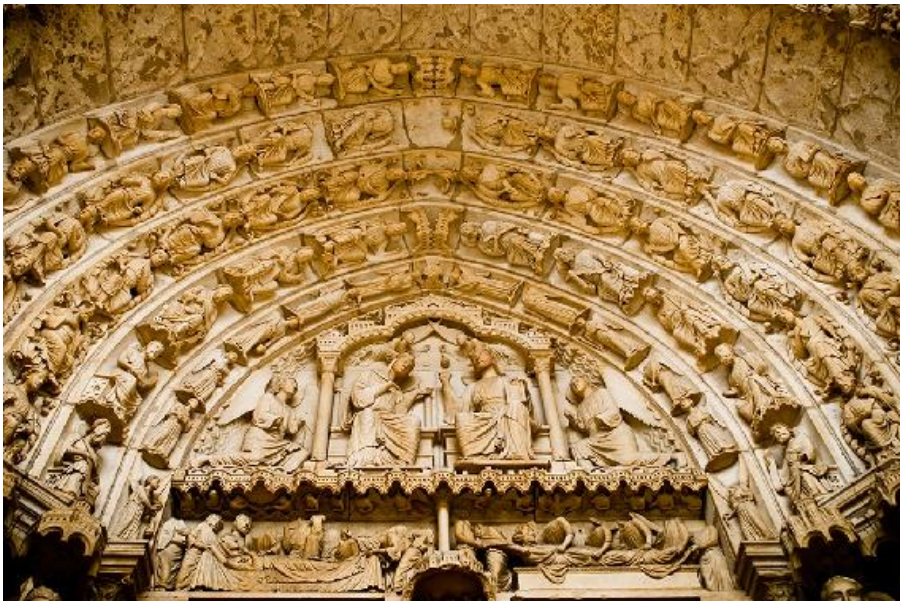
Hagia Sophia

Cathedral of Chartres in Chartres, France

Cathedral of Chartres

Cathedral of Chartres

Cathedral of Chartres

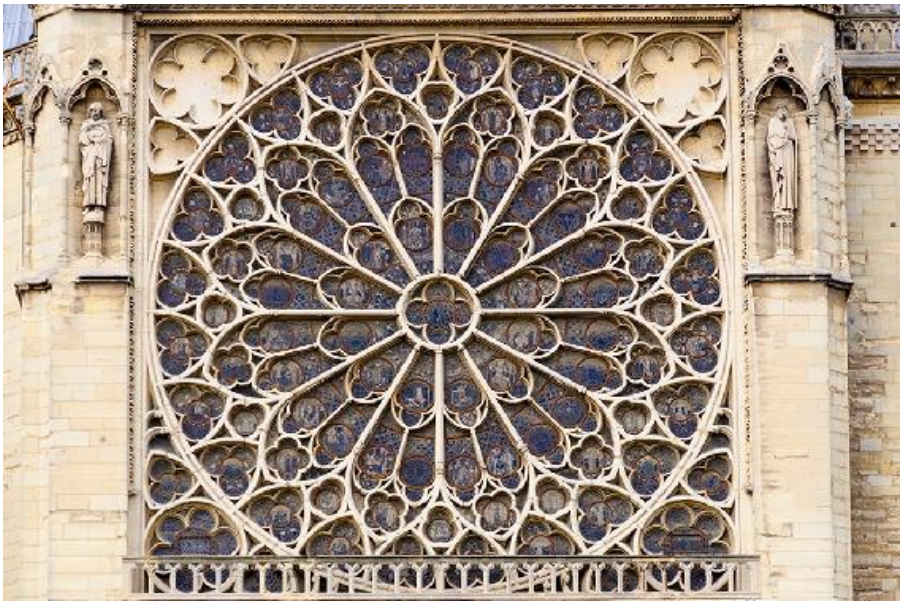


Cathedral of Chartres

Cathedral of Sens in Sens, France

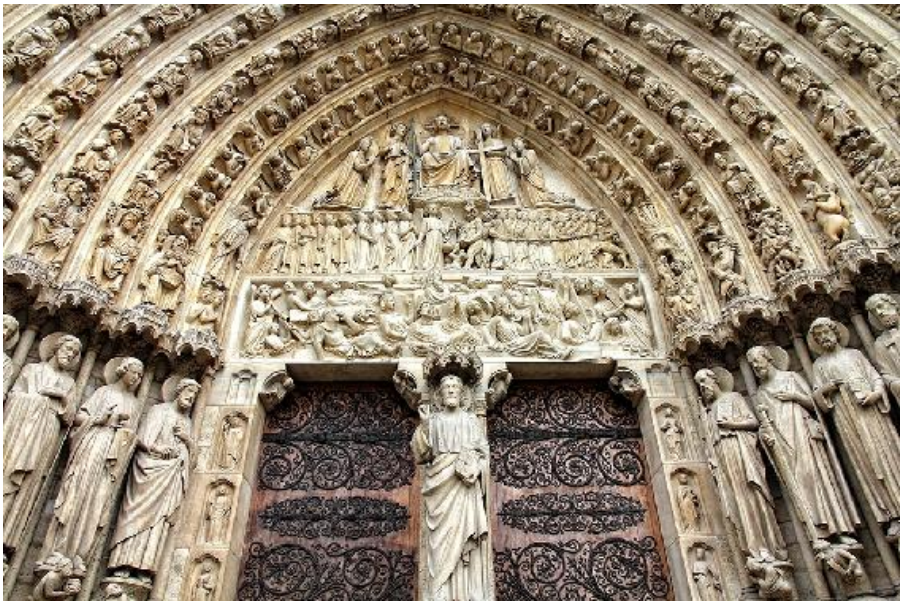
Cathedral of Notre Dame in Paris, France

Cathedral of Notre Dame



Cathedral of Notre Dame

Cathedral of Notre Dame

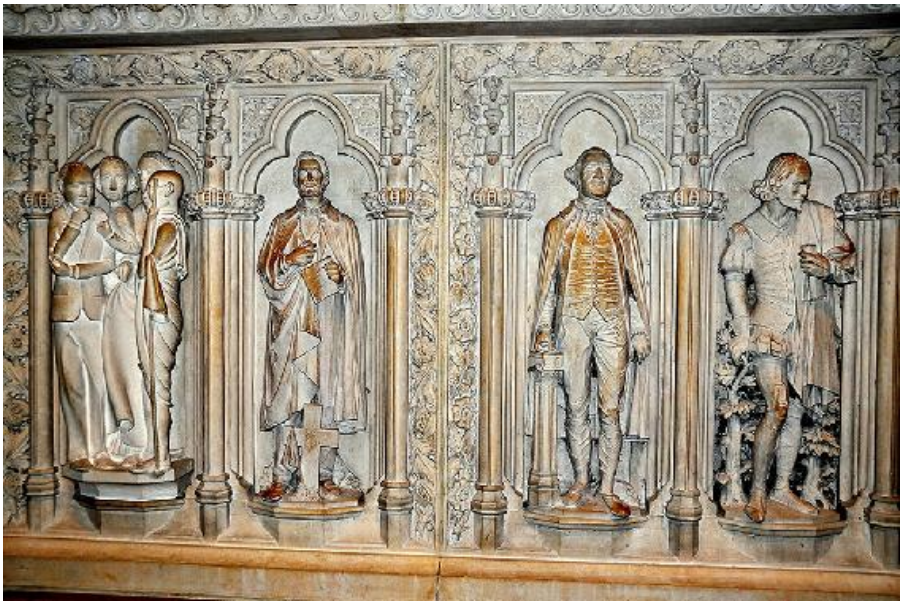


Cathedral of Notre Dame

Cathedral of Bourges in Bourges, France

Cathedral of Bourges in Bourges, France

Cathedral of St. John the Divine in New York, New York



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